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Maine Agricultural Experiment Station

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STUDIES IN MILK SECRETION. XV.

Guernsey sires' progeny performance for milk yield, butter-fat percentage, and butter-fat.

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BULLETIN 324

STUDIES IN MILK SECRETION. XV.

Guernsey sires' progeny performance for milk yield, butter-fat percentage, and butter-fat.¹

BY JOHN W. GOWEN.

INTRODUCTION

The data presented in this paper are the foundational material on which will be based subsequent studies on the progeny performance of the sires' sons,—the influence of inbreeding or relationship on production of milk or butter-fat, the effect of different families on the production of their progeny,—the present-day value of Island and American stock, etc.

The major conclusions discussed are the changes in production which have occurred in Advanced Registry cattle,—the variation of milk yield and butter-fat percentage of Guernsey Advanced Registry cattle at mature form,—the probable variation in the average production records of any sire's daughters,—the average progeny performance in milk yield, butter-fat percentage, and butter-fat for all sires having two or more daughters,—and the percentage of these daughters found within the different groups of production.

From his experience in the breeding of beef cattle Bakewell, about the middle of the 18th century, expressed the opinion that only the selection of the best for breeding purposes would accomplish progressive improvement. To this doctrine he added the principle of in-and-in breeding of the best animals. The visual demonstration of the success of these principles in the Shorthorn herd established by Bakewell and in the subsequent herds of Collings, Booth, Bates, and Cruickshank especially in the later

¹Papers from the Biological Laboratory of the Maine Agricultural Experiment Station, No. 169.

years of its existence, and the Aberdeen-Angus herds of Watson, M'Combie and others has led subsequent breeders, especially beef cattle breeders, to attempt to follow the first principle and to some extent the second. That this first principle is equally applicable to dairy cattle is shown by the success of several breeders like Colonel Le Couteur and Colonel Le Cornu in the improvement of the conformation of the early Island Jerseys. Thus, for over a century and a half the cattle breeder has had the application of these breeding principles as an ideal before him. The demonstration of this application has largely been on the characters visual to the eye and not on those like milk yield and butter-fat percentage dependent upon the internal ability of the cow. The reason for the delay of the dairy cattle breeders is not far to seek. It is far harder to obtain the data necessary to apply Bakewell's principles to breeding for milk yields and butter-fat percentages in dairy cows. The keeping of accurate records over long periods of time is necessary. No snap judgment will suffice to determine the productivity of the cow in either milk yield or butter-fat percentage. Furthermore the effect on the dairy cows' milk yield and butter-fat of such variables as age made it difficult, if not impossible, for many breeders to interpret the full meaning of these records when, after a fifty years' struggle, the machinery to collect them was finally set up as the present day advanced registries.

The Maine Agricultural Experiment Station in its work upon the inheritance of milk production and butter-fat percentage has endeavored to fill this need by furnishing to the breeders a record of the productivity of the offspring of the bulls within the different breeds on the basis of a mature production for all cows. Thus the records of a cow when made at two years old are converted to the production of the cow at mature age by multiplication of the two-year old record by a suitable factor to bring the record to that of the mature form. These correction factors have

been presented in another bulletin from this Station.² In studying the records of butter-fat percentage it was also found that age affected these records to a considerable degree within the Guernsey breed. Since this was so, correction factors were also made for the effect of age on this butter-fat percentage. Thus all cows are presented on a mature equivalent basis and are therefore sufficiently comparable from one sire to another as far as effect of age is concerned.

Another factor influencing productivity should also be considered. Namely, the possible increase in productivity of Advanced Registry cows which has taken place during the time these tests have been conducted. Such an increase may be due to several causes. It may be due to better feeding and management of the cows during test; it may be due to a constant selection of better cows for testing for the Advanced Registry; it may be due to a better inheritance received by the later generations of cows through a greater understanding and application by their makers of the laws of inheritance of milk yield and butter-fat percentage. Under any case an increase in productivity has taken place from the time of the establishment of the Advanced Registry to the present day. It is difficult to distinguish between the influence of these different factors on the productivity of the different animals. If the average increase in milk yield of the Guernsey cows is largely due to feeding and care, a correction for this factor should undoubtedly be made. If, on the other hand, it is due

²Gowen, John W.

1923. Studies in milk secretion. XIV. The effect of age on the milk yields and butter-fat percentages of Guernsey Advanced Registry cattle. Annual Report of the Maine Agricultural Experiment Station for 1923, pp. 9-20. Bulletin 311. This method of determining the correction factors for age and milk yield is the one customarily employed with results which are satisfactory for practical purposes. A slightly more exact method takes into account not only the changes in the mean milk yields with age but also the changes in the variation of milk yield with age. The formula which determines this relation is "milk yield at standard age (Y_s) equals milk yield at x age (Y_x) multiplied by standard deviation of the milk yield at standard age (σ_s) divided by standard deviation at x age (σ_x) minus mean milk yield at x age (MY_x) multiplied by standard deviation at standard age (σ_s) divided by standard deviation at x age (σ_x) plus average milk yield at standard age (MY_s)" or

$$Y_s = \frac{Y_x \sigma_s}{\sigma_x} - \frac{MY_x \sigma_s}{\sigma_x} + MY_s$$

to better inheritance no correction should be made, for such animals should be worthy of their record because they can transmit it to their offspring. The change in the average productivity of the animals making the Guernsey Advanced Registry is shown in figures 7 and 8.

The first chart (1) shows the milk production of the highest producing cows, the average production of all cows, and the milk production of the lowest producing cows for each of the different periods during the time over which the Advanced Registry has been carried. These periods were determined as follows: All cows registered below the herd book number 5000 were considered in the first period; all cows registered between the herd book numbers 5000 to 10,000 were considered in the second period; the third period was that of cows registered between 10,000 and 15,000 of herd book numbers. In this way the different classes of cows were formed. The registration period is shown at the bottom of the figure. The solid line represents the highest producing cow in any period on an age-corrected basis. The dotted line represents the average uncorrected milk production of all cows within the given period. The dot and dash line, the lowest producing cow for that period on an age-corrected basis. The average uncorrected butter-fat yield for the cows of the different periods is shown as the dot, dot, dash line.

The second chart (2) shows the same information for the butter-fat percentage. The upper solid line represents the highest butter-fat percentage for the cows within the period on an age-corrected basis. The dotted line represents the average butter-fat percentage of all cows within the period, no age-correction having been made. The dot and dash line represents the lowest butter-fat percentage of the cows within the given period.

These charts are rather surprising. They show no increase in either milk yield or butter-fat percentage during the different periods of registration of Guernsey cattle, whether these productions be taken as the highest, the average, or the lowest production for the given period. The question, however, is not settled by these charts as from the third chart (3) it will be noted that a marked age change has taken place in the animals entered for Advanced Registry during the different periods. The solid line represents the average age (as given on the right-hand side of the figure) of the cows entering the Advanced Registry for any

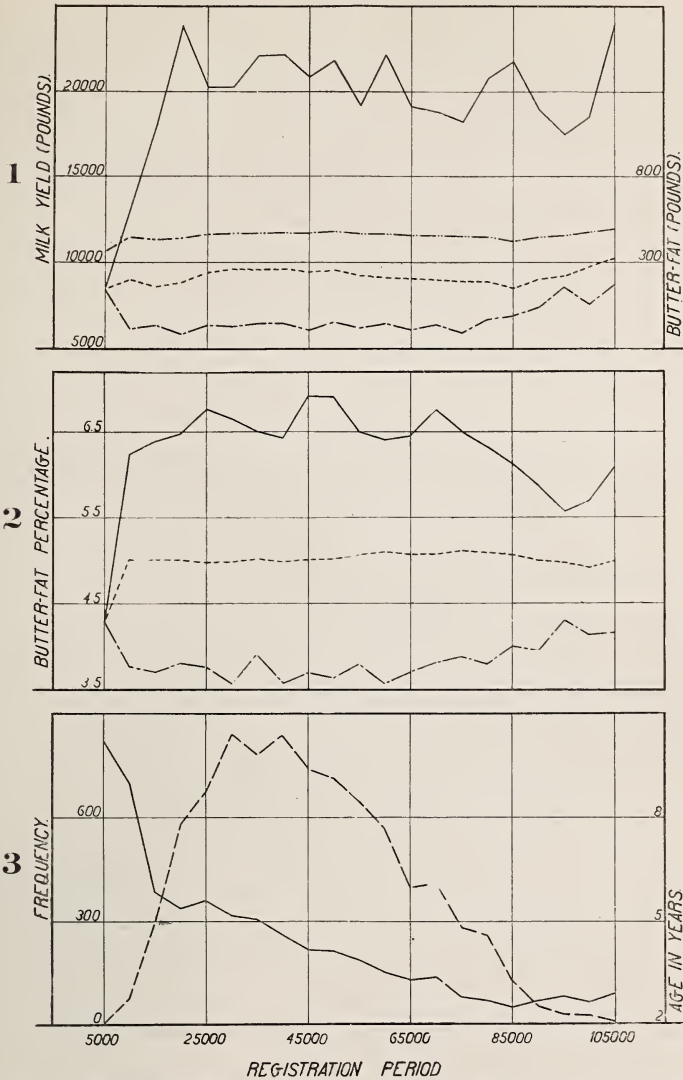


FIGURE 7. Progressive changes in Guernsey Advanced Registry cows from the time the Advanced Registry was established to the present day.

Chart (1) gives the data for milk and butter-fat yield. The cows making the Advanced Registry are divided into periods according to their herd book numbers. The age-corrected record of highest producing cow during each period is shown as the solid line; the average uncorrected milk yield as the dotted line; the lowest age-corrected milk yield as the dot and dash line; the average uncorrected butter-fat yield as the dot, dot, dash line.

Chart (2) shows similar data for the butter-fat percentage of these cows. The solid line represents the highest age-corrected butter-fat percentage of these cows for each period; the dotted line the average uncorrected butter-fat percentages for each period; the dot and dash line the lowest age-corrected record for each period.

Chart (3) shows the average ages of the cows within each group of cows as the solid line. The dashed line shows the number of cows in each group. It is clear from these charts that the age of the cows making the Advanced Registry at these different periods has changed markedly. Thus the dotted lines showing the average milk yields and butter-fat percentages of the cows for the different periods do not present a true picture of the events.

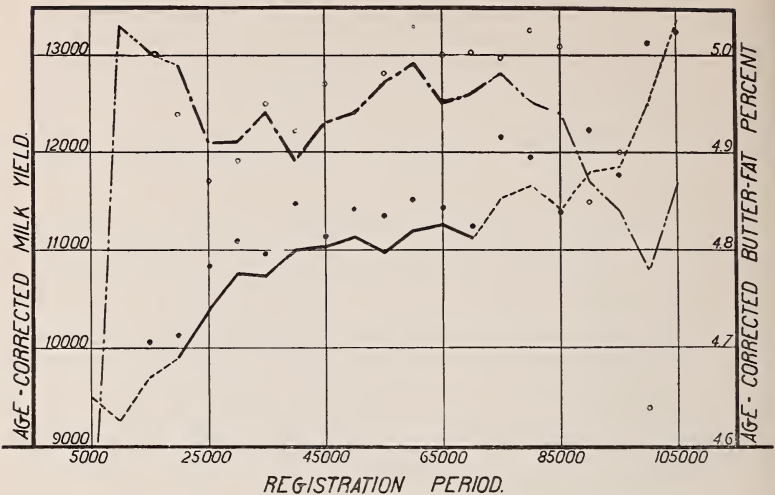


FIGURE 8. Progressive changes in the average age-corrected milk yields and butter-fat percentages of animals making the Guernsey Advanced Registry.

The dot and solid line represents the age-corrected milk yields for each period in the breed's history. The dot, dot, dash and the dot, dash line represents the age-corrected butter-fat percentages during each period. The heavy lines throughout represent the data to be given most weight. The solid circles give the average age-corrected milk yields of the recorded dams of the cows registered at the given period. The open circles show the average age-corrected butter-fat percentages of the recorded dams of the cows registered at the given period.

From figures 7 and 8 the following conclusions may be drawn. (a) Within the significant period, 20,000 to 70,000 of herd book numbers, there has been no significant change in the milk yields or butter-fat percentages of the highest and lowest cows. (b) During this time there has been a continuous decrease in the age of the cows tested. (c) There has been a significant increase in the average age-corrected milk yields of these cows during the period. (d) These cows appear to come from the better type of dams. (e) No significant change has taken place in the butter-fat percentage.

given period. It will be noted that during the early days of the Advanced Registry only older cows were entered. There has been since this time a progressive change towards testing cattle early in life, making a constant decline in the age of the cows which have been tested for Advanced Registry within the different periods of time. The dotted line shows the frequency

distribution for the number of animals shown at the left for each of the given periods of time within which the Advanced Registry data have been divided.

This decline in the age of production of the cows entering the Advanced Registry has had a marked effect on the average milk production of these cows, thus it is surprising rather than otherwise that the average production of Guernsey cattle should have remained the same during the different registration periods as shown in chart 1, rather than having declined in production for it is known that younger cows in general milk less than do older cows. When the average productions are put on an age-corrected basis as shown in figure 8, a different picture is presented. The milk yields for the different periods are shown at the left of the chart as the ordinates. It will be noted that on an age-corrected basis there has been a constant increase in the milk production of Guernsey cattle. No such increase is to be noted in the butter-fat percentage. In fact, in general, the butter-fat percentage is practically the same throughout the whole period. Within this chart the milk yield is shown as the solid and dotted line, the butter-fat percentage as the dot and dash line, the heavy lines represent the data which are significant, the light lines those of doubtful value, due to lack of numbers of individuals. For these heavy lines it will be noted that in milk yield there has been a constant increase in the production of the Advanced Registry cows, whereas the butter-fat percentages have remained practically the same throughout the period. The heavy solid dots represent the production of the dams of the cows indicated in the solid line. Thus it will be noted that the dams have been constantly selected for a higher production than the average of the cows for the different periods from which the dams were chosen. There has thus been a constant selection of cows having a better inheritance in milk yield as the Advanced Registry has progressed. A similar selection has gone on for the butter-fat percentage as shown by the higher records for the dams, shown in open circles. The selection in this case has not been quite so severe, although at the present time the severity of the selection seems to be on the increase. The butter-fat percentage has varied over a wide range throughout the period.

From these facts it seems probable that the selection of better cattle as dams of those making the Advanced Registry has had

an influence on the increase in milk production as shown by Advanced Registry Guernsey cattle. On the other hand, it seems doubtful if this is the only factor. The butter-fat percentage has changed but little during this time. Due to these facts it seems impossible to make any adequate correction for the changes in the records as they have systematically taken place during the period of collecting Advanced Registry data on Guernsey cattle. For the individual breeder, however, it would seem best for him in evaluating and comparing the data about to be given, to favor in some degree, the bull whose daughters were early entered in the Advanced Registry.

The progeny performance test, in spite of its disadvantages and the difficulties in its interpretation is today the most frequently applied measure of a sire's worth. This being the case, we have chosen to present this information as a first bulletin of this series devoted to the transmitting qualities of Guernsey sires. Generally speaking, the progeny performance test may be divided into two divisions. We need to know how milk yield and butter-fat percentage are inherited and what is the probable prepotency of heredity which the bull within a breed has to transmit to his offspring. In other words, we desire to know the bulls which will transmit to their offspring an inheritance for high milk yield or low milk yield, high butter-fat percentage or low butter-fat percentage so that this information may be utilized in actual breeding work designed to use the best lines within which to breed.

In this bulletin it is intended to analyze all available 365-day records of the daughters of Guernsey sires. In a paper which will appear shortly the daughter-dam test for all possible sires will be presented. It is intended that these two bulletins be used jointly. The data presented here for the progeny performance of Guernsey sires are three-fold.

1. To determine the mean milk yield of the daughters of these Guernsey sires as shown by the 365-day semi-official records of the Guernsey Association.

2. To determine the mean butter-fat percentage of the daughters of these Guernsey sires as shown by the same records.

3. To determine the mean butter-fat of these same daughters of these same sires.

Aside from this information the daughters are so grouped that it is possible to tell into what particular division of the

Advanced Registry they fall in their milk yields and butter-fat percentages as compared with the other cows within this breed.

MATERIAL.

The data used in this study comprise all the 365-day semi-official records of the Guernsey Advanced Registry up to and including Volume 34. The rules under which these tests were made are no doubt familiar to all. They call for a supervision of each test by an accepted representative of the Agricultural College or Experiment Station of the State in which the test is made. The rules governing the actions of these supervisors are quite inclusive, meeting practically every contingency which might arise in the conduct of the test. The aim of these rules is, of course, the safeguarding of the accuracy of the records. The precautions taken should make this body of data quite accurate.

The information given under each record is as follows:

1. Name
2. Advanced Registry number
3. Herd Book number
4. Age of cow at commencement of test
5. Length of record in days
6. Pounds and tenths of pounds of milk produced
7. Butter-fat percentage of this milk
8. Total pounds of butter-fat contained in the milk

METHODS.

This investigation includes all bulls having two or more daughters with 365-day records. The sires with one tested daughter were not included because of the great variation of these records due to the agencies of chance. This variation may be seen to be of considerable magnitude even where two or more records are used. It would, of course, be much higher with those sires which have only one daughter, in fact, so high, that little or no reliance could be placed on such a record as a measure of the bull's worth as a breeder.

The rules governing the selection of the cows' records were arbitrarily chosen to include the following terms:

1. If a cow has one 365-day record that record is used.
2. If a cow has two or more 365-day records the record selected is that nearest 8 years of age.
3. The records of cows less than 365-days in length are omitted in this study.
4. All records are placed on a mature equivalent basis for the production of the cows. This includes the correction of the milk yield for age, butter-fat percentage for age, and consequently butter-fat for age.

The method by which these corrections are derived and the way in which they are used is given in Studies of Milk Secretion XIV, The Effect of Age on Milk Yield and Butter-Fat Percentage of Guernsey Advanced Registry Cattle, Bulletin 311 of the Maine Agricultural Experiment Station.

CLASS TO WHICH EACH COW BELONGS.

To determine the class to which each of the daughters of a given bull may belong as compared with those of the rest of the breed, the milk records for all cows have been arranged in order of the amount of milk produced. The milk records were then divided into eight equal parts so that there were the same number of cows in each. These division points are called "octiles" as they divide the age-corrected milk production of Guernsey cattle into these eight equal parts. These parts are designated, *I* for the highest group of producers, *J* for the second group of producers, and so on down to the lowest group of producers called *P*. These eight equal divisions of cattle make it possible to exactly compare all the offspring of a bull in terms of these eight letters, showing exactly where in the scale of production of all Guernsey cows the offspring of any given bull may be located. The data from which these divisions may be derived are shown in Table 1 as the frequency distributions of the age-corrected milk yields for the 365-day period.

TABLE 1.

Frequency distribution of corrected milk yields of the 365-day period for Guernsey Advanced Registry cows.

Milk Yield, Pounds	365-day Frequency	Milk Yield, Pounds	365-day Frequency
5000 - 6000	1	14000	338
6000	75	15000	169
7000	424	16000	101
8000	918	17000	45
9000	1217	18000	28
10000	1186	19000	12
11000	1036	20000	6
12000	727	21000	1
13000	533	22000 - 23000	3
		Total	6820

From table 1 it is to be noted that there are 6,820 Guernsey Advanced Registry cows with one or more 365-day records. One of these cows had a milk production between 5000 and 6000 pounds. Seventy-five of the cows had milk productions between 6000 and 7000 pounds, 424 of these cows had milk productions between 7000 and 8000 pounds, and so on until the 6,820 cows are distributed according to their milk yield. The distribution of the butter-fat percentages is shown in Table 2.

TABLE 2.

Frequency distribution of butter-fat percentages of the 365-day period for Guernsey Advanced Registry cows.

Butter-fat Percentage	365-day Frequency	Butter-fat Percentage	365-day Frequency
3.4 - 3.6	2	5.2	797
3.6	11	5.4	561
3.8	76	5.6	281
4.0	237	5.8	141
4.2	487	6.0	70
4.4	842	6.2	37
4.6	1069	6.4	11
4.8	1125	6.6	2
5.0	1068	6.8 - 7.0	3
		Total	6820

Table 2 shows similar information for the butter-fat percentages. Thus of the 6,820 cows two had butter-fat percentages

between 3.4 and 3.6 per cent, 11 between 3.6 and 3.8 per cent, 76 between 3.8 and 4.0 per cent. The most frequent butter-fat percentage for Guernsey cows was that between 4.8 and 5.0 where there were 1125 such cows. The highest age-corrected butter-fat per cent was between 6.8 and 7.0 per cent. From these frequency distributions it is possible to derive the average milk yield and butter-fat percentage of these cows together with the variation of this milk yield and butter-fat percentage and the octile divisions above described. These data are shown in table 3.

TABLE 3.

Average milk yield and butter-fat percentage, variation in milk yield and butter-fat percentage, and octile divisions of milk yield and butter-fat percentage for Guernsey Advanced Registry cows at mature form.

	Mean	Standard Deviation	Coefficient of Variation	Octiles						
				1st	2nd	3rd	4th	5th	6th	7th
Milk	10942.2±19.0	2320.6±13.4	21.21±.14	8480	9240	9935	10641	11399	12328	13698
Butter-fat Percentage	4.940±.003	.469±.002	9.50±.08	4.40	4.60	4.76	4.91	5.06	5.23	5.46

Table 3 shows that the average mature milk yield of this group of cows is 10,942 pounds. The average mature butter-fat percentage is 4.940 per cent. The variation of the milk yields of the different cows is large as indicated by the standard deviation of 2320 pounds. The standard deviation of the butter-fat percentage is .469 per cent. The coefficient of variation shows that the milk yield is relatively more variable than the butter-fat percentage.

The octile divisions are given for each class. Thus the highest group of milk producers called *I* have a milk production above the 7th octile or 13,698 pounds. The second group of milk producers called *J* have milk yields between 12,328 and 13,698 pounds. The third group of milk producers have milk yields between 11,399 pounds and 12,328 pounds. This group is called *K*. The fourth have milk yields between 10,641 pounds and 11,399 pounds and is called *L*. The fifth have milk yields

between 9,935 pounds and 10,641 pounds and is called *M*. The sixth have their milk yields between 9,240 pounds and 9,935 pounds and is called *N*. The seventh have their milk yields between 8,480 pounds and 9,240 pounds and is called *O* and the lowest have their milk yields less than 8,480 pounds and is called the *P* group. It is to be remembered that each of these groups have an equal number of cows and that they represent the exact position of the cow's milk yield as compared with those of the other animals within the breed. In a similar way the records for butter-fat percentage may be described. These limits are

5.46 butter-fat percentage and above = highest group or	<i>I</i>
5.23 butter-fat percentage to 5.46 butter-fat percentage = 2nd highest group or	<i>J</i>
5.06 butter-fat percentage to 5.23 butter-fat percentage = 3rd highest group or	<i>K</i>
4.91 butter-fat percentage to 5.06 butter-fat percentage = 4th highest group or	<i>L</i>
4.76 butter-fat percentage to 4.91 butter-fat percentage = 5th highest group or	<i>M</i>
4.60 butter-fat percentage to 4.76 butter-fat percentage = 6th highest group or	<i>N</i>
4.40 butter-fat percentage to 4.60 butter-fat percentage = 7th highest group or	<i>O</i>
Below 4.40 butter-fat percentage = 8th or lowest group or	<i>P</i>

To better illustrate the use of these divisions in describing the daughters of any given sire an actual case may be given. The bull Fandaph of Willswood, 7199, had two daughters. One of these daughters at mature form produced 11,484 pounds of milk and 4.91 per cent of butter-fat. The other daughter produced 10,081 pounds of milk and 4.46 per cent of fat. The first daughter's milk yield was between 11,399 pounds and 12,328 pounds, or she was in the *K* class of milk producers. The second daughter's milk yield was between 9,935 pounds and 10,641 pounds or she was in the *M* class of milk producers. The record for the sire would be:

$$1K + 1M$$

It is often desirable to be able to compare the proportionate number of the different classes of daughters of one sire with the proportionate number of the different classes of daughters of

another sire. To allow such a comparison it is advisable to place these records on a percentage basis. Thus in the illustrated case the record would be:

$$50K + 50M$$

Such a scheme allows a ready comparison of the records of any sire's daughters with that of another.

In the illustrated case for the sire Fandaph of Willswood the record of his daughters for butter-fat percentage would be as follows: The daughter, which has the butter-fat percentage of 4.91 per cent as her average per cent, would lie between 4.76 and 4.92 or in the *M* class of cows. The daughter with the average butter-fat percentage of 4.46 would have her average per cent between 4.40 and 4.60 or in the *O* class of cows. Thus the final record would be:

$$50M + 50O \text{ for this sire's daughters' butter-fat percentage.}$$

With this system of recording the daughters of a given bull it was possible to reduce the bulkiness of the records as found in the Advanced Registry so that the productivity of any cow may be given as one of eight groups. Each of these eight groups have an equal number of cows in them so that they are strictly comparable and give an exact picture of the relative production of the cow with reference to all of the cows of the breed. Furthermore the records of production for any given number of cows of a given bull may be easily recorded within this system. Figure 9 gives a picture of the amount of milk produced at mature form and the number of cows producing it for all cows in the Guernsey Advanced Registry. This frequency distribution is drawn from the data of Table 1. The division lines show the places where the separation between the different groups takes place. The letters *I, J, K, L, M, N, O, P* show the place in this frequency distribution of the milk production where the cows' records fall according to the letter which their milk yields bear.

Similar information is shown in figure 10 for the butter-fat percentages of these cows.

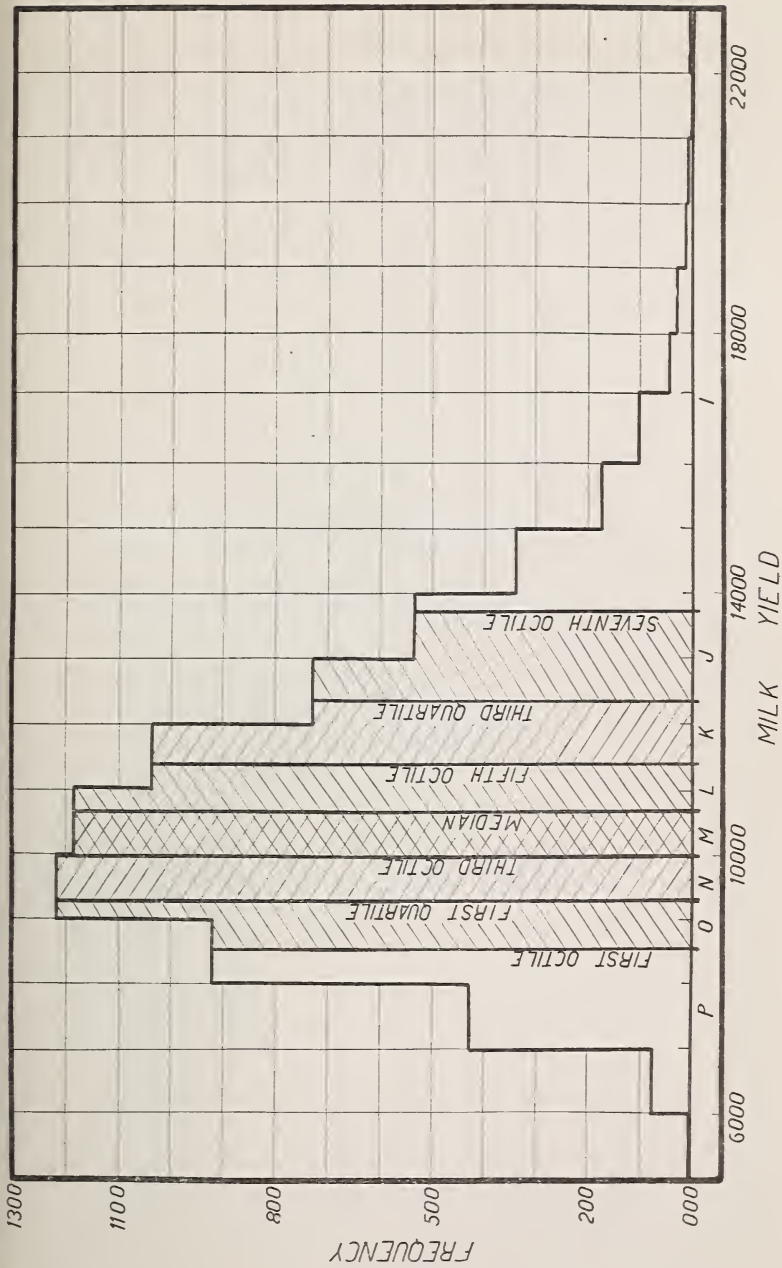


FIG. 9. Histogram showing the milk yields of Guernsey cows at mature form. The distribution is divided in eight equal parts by the octile lines. These parts or letters are shown at the bottom of the figure. These letters are used to designate the relative milk yields of a sire's daughters.

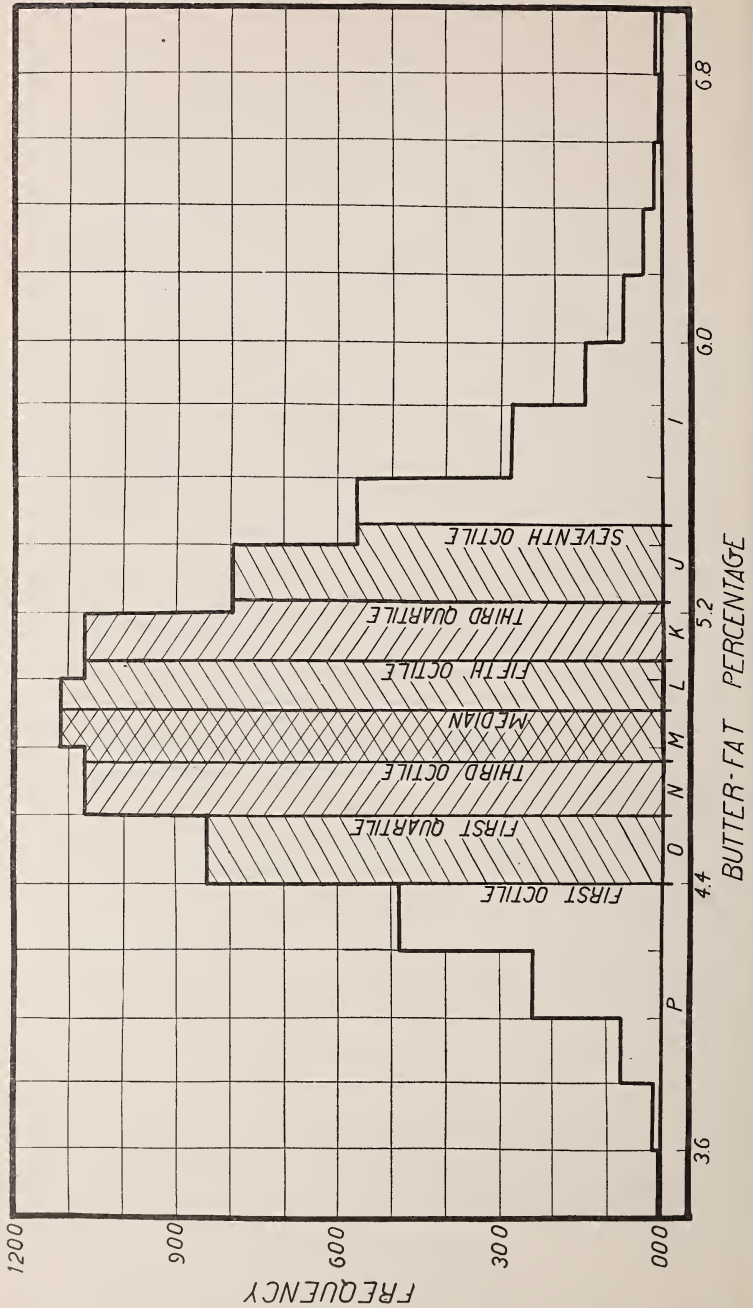


FIG. 10. Histogram showing frequency distribution of butter-fat percentage for Guernsey Advanced Registry cows.

Figure 10 shows the frequency distribution of the 365-day butter-fat percentages of Guernsey Advanced Registry cattle in mature form. The lines indicated as the octiles divide these frequency distributions into eight equal parts, each part having the same number of cows as the others. Each part is then lettered showing the relative amount of butter-fat percentage that these cows produce. These letters are used to designate the butter-fat percentages of the sires' daughters.

PROBABLE ERROR OF THE AVERAGE MILK YIELDS, BUTTER-FAT PERCENTAGES, AND BUTTER-FATS OF THE SIRE'S DAUGHTERS.

The data in table 3 furnished the necessary information to determine the probable errors of the mean milk yield, butter-fat percentage, or butter-fat of sires' progeny performance tests as determined from their daughters' records. It seems best in these calculations to use the standard deviation of the whole population rather than the standard deviation of the individual sire's

TABLE 4.

Probable errors of mean progeny performance of Guernsey sires.

No. of Daughters	Milk Yield	Butter-fat Percentage	Butter-fat	No. of Daughters	Milk Yield	Butter-fat Percentage	Butter-fat
2	1107	.224	52.93	28	296	.060	14.15
3	904	.183	43.22	29	291	.059	13.90
4	783	.158	37.43	30	286	.058	13.67
5	700	.142	33.48	31	281	.057	13.44
6	639	.129	30.56	32	277	.056	13.23
7	592	.120	28.29	33	272	.055	13.03
8	553	.112	26.47	34	268	.054	12.84
9	521	.106	24.95	35	265	.054	12.65
10	495	.100	23.67	36	261	.053	12.48
11	472	.095	22.57	37	257	.052	12.31
12	452	.091	21.61	38	254	.051	12.14
13	434	.088	20.76	39	251	.051	11.99
14	418	.085	20.01	40	247	.050	11.84
15	404	.082	19.33	41	244	.049	11.69
16	391	.079	18.71	42	242	.049	11.55
17	380	.077	18.16	43	239	.048	11.42
18	369	.075	17.64	44	236	.048	11.28
19	359	.073	17.17	45	233	.047	11.16
20	350	.071	16.74	46	231	.047	11.04
21	342	.069	16.34	47	228	.046	10.92
22	334	.067	15.96	48	226	.046	10.80
23	326	.066	15.61	49	224	.045	10.69
24	320	.065	15.28	50	221	.045	10.59
25	313	.063	14.97	63	197	.040	9.43
26	307	.062	14.68	97	159	.032	7.60
27	301	.061	14.41				

daughters as it is felt that by so doing a more nearly true value of the probable error is obtained. Table 4 gives these probable errors for the Guernsey sires.

Table 4 gives the probable errors for milk yields, butter-fat percentages, and butter-fats for the progeny performance of Guernsey sires. These probable errors are based on 365-day records. The probable error is dependent upon the variation in milk yield, butter-fat percentage, or butter-fat and the number of daughters on which a sire's progeny performance is based. The first column of Table 4 shows the number of the sire's daughters. The second column shows the probable error for milk yield, the third column the probable error for butter-fat percentage, and the fourth column the probable error for butter-fat. The use of this table may be illustrated by the record of Langwater Hayes Rosie's King of the May. This sire has 16 daughters in the Advanced Registry. These daughters have an average milk yield of 14,792 pounds for the year test at mature form. By following down the first column of Table 4 the probable error for the 16 daughters is found in the second column as 391 pounds of milk. In other words, if it were possible to obtain 16 more daughters from similar cows sired by Langwater Hayes Rosie's King of the May, it would be expected that the average of these 16 daughters once out of two times would be within 14,792 pounds plus or minus 391 pounds, or between 14,401 pounds and 15,183 pounds. The average butter-fat percentage of the 16 daughters of Langwater Hayes Rosie's King of the May was 4.71. From Table 4 it is noted that for 16 daughters the probable error of this butter-fat percentage is .079 or once out of two times (if it were possible to select another group of sixteen daughters of Langwater Hayes Rosie's King of the May) it would be found that these daughters would have an average butter-fat percentage of between 4.63 and 4.79. Langwater Hayes Rosie's King of the May has a progeny performance of 696.7 pounds of butter-fat as the average for his daughters. The probable error of this record is 18.7 pounds. In this manner the production and probable variation which might be found for any sire's progeny performance may be determined from Table 4. It is to be noted that the probable errors are very much increased when the number of daughters is few. Thus a great deal more dependence may be placed in the records of a sire having a large number of

daughters than in the records of a sire having relatively few daughters.

PROGENY PERFORMANCE OF GUERNSEY SIRES, FOR THEIR
DAUGHTERS' MILK YIELD, BUTTER-FAT PERCENTAGE,
AND BUTTER-FAT.

Table 5 gives the progeny performance of all Guernsey sires having two or more daughters. The data are arranged according to the name of the sire. The sires' names are in alphabetical order. The information given includes the sire's name, herd book number, the number of his daughters with 365-day records, the progeny performance for milk yield on a mature basis, the relative milk yields of these daughters as compared with those of the rest of the breed given under the heading "Octiles," the average butter-fat percentage of these daughters on a mature basis, the relative butter-fat percentages of these offspring as compared with the cows of the rest of the breed given under "Octiles," and the average butter-fat of the daughters. In this manner a complete picture of the progeny performance of all Guernsey sires having two or more daughters is presented, on a strictly comparable basis.

Some of the more obvious results which flow from the use of this table may be illustrated by taking one or more bulls for comparison. The sire Langwater Hayes Rosie's King of the May is found by following the alphabetical index of sires' names. The herd book number of this sire is 16,723. He has 16 daughters with 365-day records. These daughters have an average milk yield on a mature basis of 14,792 pounds. Sixty-three per cent of them are in the *I* class of milk producers or the highest in the breed. Nineteen per cent are in the next highest class of milk producers, 6 per cent are in the next highest class, and 13 per cent are in the *M* class of milk producers. The exact meaning of the milk production for these different classes is given at the head of the table. Thus the *I* class of milk producers have productions above 13,698 pounds. The *J* class between 12,328 pounds and 13,698 pounds, and so on. In this way, the productivity of this sire's daughters may be easily determined. The progeny performance for the butter-fat percentage of this sire is 4.71 per cent. Six per cent of his daughters are in the highest class of butter-fat testers, 13 per cent in the *K* class, 13 per cent

in the *L* class, 25 per cent in the *M* class, 6 per cent in the *N*, 6 per cent in the *O* class, and 31 per cent in the lowest class of butter-fat testing cows in the Guernsey breed. The average butter-fat of this sire's progeny was 6967 pounds on a mature equivalent basis. Thus Langwater Hayes Rosie's King of the May was an excellent bull especially when the amount of milk which his daughters produced is considered.

It is interesting to compare this bull with his sire, Imp. King of the May. Imp. King of the May will be found under King of the May as all imported sires have been put under their actual name. The herd book number of Imp. King of the May is 9,001. He has 29 daughters. The average milk production of these daughters is 14.253 pounds, or slightly but not significantly less than that of Langwater Hayes Rosie's King of the May. King of the May's daughters are 58 per cent in the highest class of milk producers, 17 per cent in the next class, 7 per cent in the *K* class of milk producers, 7 per cent in the *L* class, 7 per cent in the *M* class, and 3 per cent in the *O* class. In other words, King of the May had no daughter that did not produce more milk than the lowest class of milk producers in the Guernsey Advanced Registry. The average butter-fat test of King of the May's daughters is 4.96 per cent. This per cent is just about the average for the breed. King of the May's daughters are therefore slightly better butter-fat testers than are the daughters of Langwater Hayes Rosie's King of the May. Of King of the May's daughters 7 per cent are in the highest class of butter-fat testers, 7 per cent are in the *J* class, 24 per cent in the *K* class, 14 per cent in the *L*, 14 per cent in the *M*, 10 per cent in the *N*, and 24 per cent in the *O* class. The average butter-fat produced by King of the Mays' daughters is 706.9 pounds, or about 10 pounds more than the butter-fat production of the daughters of Langwater Hayes Rosie's King of the May.

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocities	Average daughters' butter-fat per cent	Ocities	Average daughters' butter-fat (pounds)
Admiral of the Fountain	R.G.A.S., 2445 P.S.	3	10398	33J+33N+33O 500+50P	4.89	33J+33M+33O 50K+500	508.5
Admiral Penwyn	8294	2	8097		4.86		393.5
Admiral Togo	R.A.A.S., 53 P.S.	5	11512	20I+50J+20M+40N	5.05	20J+20K+40L+20M	581.4
Admiral Togo	R.A.A.S., 51 P.S.	2	10509	50K+50N	4.89	50I+50M	513.9
Admiral Togo of Passee Villa	R.G.A.S., 318 P.S.	2	11914	100K	4.59	50N+50P	546.9
Atonis of Fern Ravine	13268	2	8657	50N+50P	4.35	50N+50P	376.6
Arcneas	4853	5	9234	20I+20M+200+40P	4.39	20M+20N+60P	405.4
Imp. Amiable of France	13739	7	11731	25I+13J+25K+13M+25N	5.09	25I+13K+25L+13M+25N	597.1
Imp. Amiable of the Isle	18373	8	10656	14J+14K+14M+14N+ 28O+14P	5.26	71J+29K	528.9
Amiable's Columbus of Oak Ridge	26845	3	9921	33L+33M+33O	4.56	33N+67O	452.4
Alderney II	R.G.A.S., 2215 P.S.	14	12771	29I+36J+7K+14L+7N +7P	4.79	7I+7J+14K+7L+7M+ 21N+21O+14P	611.7
Imp. Alderney Raymond	26357	23	11014	9I+4J+30K+13L+17M +9N+17O	4.65	13K+13L+13M+17N+ 17O+26P	512.2
Allenwood King Regent	23641	9	11556	22J+44K+11L+11M+ 11O	4.73	11J+22L+22N+33O+11P	435.6
All Right	11894	2	10397	50K+50O	4.79	100P	456.6
Alstar	23656	4	10919	25J+25K+25M+25P	4.83	25K+75N	527.4
Alpheas's Duke	14491	3	9069	33M+33O+33P	4.81	33I+33M+33O	436.2
Alta Crest Meddler	11828	4	8565	25N+25P+50O	5.14	50I+25M+25O	437.1
Ambition	11683	6	12194	17I+33J+33L+17M	5.02	17I+33J+17M+17N+17O	612.1
Ambler	7892	5	9641	26J+40N+50O+20P	5.18	20I+40J+20L+20O	499.4
Anna Dean Prince	25752	4	13645	50I+50J+50K	4.04	50M+25N+25P	633.1
Anton's May King	27387	3	11664	35J+33K+33M	5.45	67I+33K	655.7
April King	R.G.A.S., 1407 P.S.	2	9678	50L+50P	5.18	50I+50N	501.3
Arbitrator of Wawa	11652	2	11685	50I+50O	4.64	50L+50P	542.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Acher of Chibmark	13376	7	10238	29K+14M+25N+25O	4.72	14J+14K+14M+14N+29O+14P	483.2
Argo of Wastland	10452	2	8669	50N+50P	5.81	100I	503.7
Armored's Lord Orange	17394	3	12698	33I+33L+33M	4.83	33K+67N	584.3
Assurance of Lyndon Heights	10079	3	8902	50N+50P	5.15	50I+50O	458.5
Assurance of Haddon	7420	2	9924	67M+33O	4.70	33J+33N+33P	466.4
Athenian	9981	2	8751	50M+50P	4.78	50M+50N	418.3
Atlantic's Glenwood of Pinchurst	9385	2	10182	50M+50N	4.49	100O	457.2
Imp. Atlas's Governor	24823	4	9848	25J+25N+25O+25P	5.58	25J+25K+50I	549.5
Imp. Atlas's Glenwood of Pinchurst	7369	4	10615	25I+25L+25M+25P	5.60	50J+25K+25O	540.3
Imp. Aught of Mobile	7750	2	9217	50N+50O	5.31	50I+50I	489.4
Auribella's Glenwood of Pinchurst	9408	2	11014	50J+50M	4.25	50O+50P	506.3
Auribella's Main-Sheet	8870	8	10736	13I+25K+25L+13N+25O	4.49	13I+13N+38O+38P	482.9
Auribella's Squire	6554	3	10130	33L+33M+33O	5.00	33K+33I+33M	507.5
Aurora's Echo	6702	2	7131	100P	5.54	50I+50K	395.1
Austerlitz of Craigamoor	31230	3	11889	33J+33K+33L	4.67	33K+33O+33P	555.2
Backgammon	16942	2	8921	100O	4.70	50M+50O	419.3
Banzai	10136	4	13083	25I+25J+25K+25M	5.08	25J+25K+25L+25M	664.6
Barmouth of Pencoyd	11059	12	9202	8K+25M+8N+25O+33P	4.95	33J+25K+17L+8M+17P	455.5
Barney of Lewison	19102	2	9748	50M+50N	4.51	50N+50P	439.6
Baron of Sarnia	20687	2	14165	50I+50N	4.33	50O+50P	613.3
Barrington May King	19312	16	11134	13I+25K+25L+13M+19N+6P	5.28	50I+6J+6K+13L+6M+19N	587.9
Baubigny's Squire of Keewaydin	21834	7	10791	14J+29K+14I+14M+14N+14P	4.98	14I+14K+43L+14M+14P	537.4
Beacon Light B.	9417	2	17761	100I	4.35	50O+50P	772.6
Beacon's Acher	18369	2	9800	50M+50N	4.86	50K+50O	476.3
Beau Regal	13448	7	11324	14L+14I+14K+14L+29N+14P	5.04	14I+29K+29L+29N	570.7
Beau Regal's Chance	17428	2	10199	50K+50P	5.28	100J	538.5
Beatty's Gold Basis of Village Farms	12467	3	13266	33I+33J+33N	4.83	33K+33I+33O	640.7
Imp. Beauty's Pearl's Gay Lad	17611	2	10348	50K+50O	5.39	50I+50J	557.8
Imp. Beda's May Day	34995	4	10694	25K+25L+25N+25P	4.85	25I+25K+25O+25P	489.6
Beda's May King	11863	23	11766	22I+13J+22K+22L+4M+4O+13P	5.24	26I+26J+17K+17M+4N+9P	616.5

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Imp. Beechwood's Pride Bogalore	9550 10101	3 12	9567 11317	67M+33P 81+25J+17K+17L+17M +8N+8P	4.75	33L+33M+33O	451.4
Bogalore's Prince Bell Buoy of Linda Vista	15357 19450	2 20	11081 11340	50K+50N 101+31J+15K+10L+5M +15N+50+10P	4.81 4.55	23I+8L+8M+17N+25O+ 17P 50N+50O	544.3 504.2
Belle-Vernon's Jeweller Bell-founder	9306 11081	7 16	12106 13801	141+29J+14K+29L+14N 44+19J+25K+6M+6N	5.13	10I+40J+15K+10L+5M +15N+5P	581.7 590.8
Ben Bishop Bambow of Warren Wood	3506 E.G.H.B	6	8639	17M+33O+50P	5.08	13N+6O+6P 50J+33L+17N	695.6 438.9
Benjamin Ben Saunpson	1801 1931	2 3	10885 8505	56J+50O 33N+67P	5.11 5.31	50J+50M	556.2 451.6
Benton Harbor Bosby Farm Jupiter	5480 9746	3 5	9662 10844	33K+33L+33P 20I+20L+40M+20N	5.38	33I+33J+33M 33I+33J+33M	535.4 536.8
Bosby Farm Jupiter 4th Bosson	9091 12914	3 2	9614 11065	33I+33O+33P 50I+50P	5.22	20I+20J+40N+20O 33I+33K+33N	501.9 503.5
Bosson's Glenwood Imp. Bess' Sequel of the Isle	12916 12768 16914	3 2 7	11024 10858 12198	33J+33M+33N 50K+50M 14I+43J+14L+29N	4.76 5.03	50N+50P 33K+33N+33P 30K+50L 14J+14I+29M+14N+14O +14P	524.7 546.2
Best Bower Betsey Boy of Riverside Betsey's Glenwood Buckleigh	4715 8659 12319 R.G.A.S. 3732 P.S.	4 2 2	9819 11331 12514	25I+25M+25N+25P 56J+50M 56J+50K	4.74 4.78 4.51	50M+50N 50L+50O 50N+50P	585.5 465.4 541.6 564.4
Bijou Lad of Halycon Imp. Bijou's Star Blake of Valley Falls Imp. Billy L. of Paradise Billy of Paradise Spring City Billy's Fancy	17553 13829 4923 15228 21162 R.G.A.S. 2245 P.S.	2 2 4 2 3 4 4	11078 11952 10910 7815 12960 10763 13127	50K+50M 56J+50L 25K+25L+50M 100P 33I+33J+33N 75L+25M	4.83 5.75 4.88 5.31 4.59 4.95	50J+50P 100I 25I+50M+25N 50I+50L 33I+33N+33P 25I+25L+50O	535.1 687.2 532.4 415.0 552.2 532.8
		4	13127	25I+25J+25K+25L	4.81	50K+25O+25P	631.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Imp. Billy's France	12476	6	10794	171+17L+17M+17N+17O+17P	4.70	171+17L+17M+17N+17O+17P	507.3
Imp. Billy's France II. of the Frie Baton	21185	2	10891	50L+50M	5.54	50L+50M	603.4
Imp. Billy's France of the Isle	21183	19	11056	161+11J+11K+11L+16M+21N+50+11P	4.66	51+5J+5K+11L+11M+16N+16O+32P	515.2
Bishop of Hardwick	8106	2	11256	50K+50L	4.28	100P	481.8
Bishop of Hildesheim	12091	5	10656	20J+40K+20N+20O	5.67	60I+20J+20L	604.2
Branchflower's Raymond of Lewison	18150	2	10195	50J+50P	4.71	100N	480.2
Blue Belle's Sequel	23723	2	11807	50J+50N	5.39	100J	636.4
Bob of Maesmawr	21254	2	10549	50L+50M	4.89	50I+50P	515.8
Bob Rhina	16141	5	11455	40J+50I+20L+20O	5.11	50I+20K+60L	585.4
Bob Rhina's Monogram	29095	3	13960	67I+33J	4.71	33I+33N+33O	657.5
Bob Rhina's Superior	27337	2	7948	100P	4.86	50K+50N	286.3
Bond Boy of Oaks Farm	16983	2	12614	50J+50K	5.12	100N	645.8
Bonnie Coral Boy of Haddon	10171	3	10171	100M	4.31	33N+67P	458.4
Bonnie Fanning's Glenwood	14001	3	9165	33M+33N+33P	5.90	33I+33J+33K	504.1
Bonnie Mere	19967	2	9443	50L+50P	5.13	50K+50L	484.4
Bonny Boy of Riverdale	29070	2	11873	50J+50M	5.05	50I+50O	599.6
Bobcep's Mar of Iowa	22134	7	11387	29I+29K+14L+14O+14P	5.12	14I+14J+14K+29L+14M+14O	583.0
Imp. Border Raider	22243	14	12590	36I+26J+7K+21L+7P	5.08	7I+36J+7K+14L+21M+7N+7O	639.6
Boreal	9850	2	13207	50I+50L	4.63	50N+50O	614.3
Boxer V.	R.G.A.S. 1981 P.S.	2	12082	50J+50K	4.77	50M+50N	576.3
Bravo of Rich Neck	35337	2	10052	50M+50N	5.21	50I+50M	523.7
Braye Boy 3d	R.G.A.S. 1868 P.S.	2	11375	50J+50N	4.28	50O+50P	480.9
Brilliant of the Gree	R.G.A.S. 2377 P.S.	16	11337	19I+19K+25L+6M+25N+6O	5.01	19I+13J+19K+13L+13M+13N+13P	568.0

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Brilliant of the Gree II.	R.G.A.S. 2944 P.S.	7	10664	29L+14L+29O+29P	4.72	14L+14J+14N+14O+43P	517.5
Brilliant of the Gree III.	R.G.A.S. 3183 P.S. 1907	3	9024	67N+33O	5.39	33L+33J+33K	486.4
Brittware Roland	F.G.H.B. 15739	2	9474	50L+50P	5.83	50L+50K	552.3
Brookton of the Glen	15739	3	12797	33L+33J+33N	4.76	33L+33M+33P	609.1
Brutus of Bayside	13325	2	9063	50L+50L	5.24	50M+50P	474.9
Buckthorn	4781	11	10739	27L+9J+9L+9M+18O+27P	5.14	18L+18J+27K+18M+9N+9O	552.0
Buller of the Sages	R.G.A.S. 1992 P.S.	2	7160	100P	5.81	100L	416.0
Bullion of Edgemoor	34510	3	12190	33L+33K+33M	4.77	33L+33M+33O	531.5
Buster of Maple Glen	11933	2	9382	50L+50P	5.29	50L+50P	496.3
Butter Boy of the Brave	R.G.A.S. 2140 P.S.	2	10566	50L+50M	4.54	50L+50P	479.7
Butter Boy III of the Brave	R.G.A.S. 2388 P.S.	6	11173	17J+33K+33L+17O	4.71	17J+17K+33N+17O+17P	526.2
Buttercup's Brave	19987	4	9015	25K+25O+50P	5.28	50L+25K+25M	476.0
Buttercup's Hair	7533	2	9976	50M+50N	4.33	50N+50P	432.0
Butter Lad of the Brave	R.G.A.S. 2675 P.S.	3	11058	67K+33O	4.71	33L+67O	520.8
Butter Lad II. of the Brave	41130	2	11250	50K+50M	4.58	50M+50P	515.3
Butter Lad of the Gree	30663	4	8552	25N+25O+50P	4.89	25J+25L+25M+25O	418.2
Buttermaker's Doctor of Hickory Grove	22903	2	10774	50J+50O	5.13	50L+50O	552.7
Byron Tueker	10421	3	11772	33L+33K+33O	4.89	33K+33M+33N	575.7
Caligula	23329	2	9532	100N	5.20	50L+50K	495.7
Canada's Jewel	6324	4	10722	25K+50L+25N	4.36	25N+50O+25P	467.5
Canadian	R.G.A.S. 1809 P.S.	2	10467	50L+50M	4.73	50L+50P	495.1
Captain Knias	10289	2	9695	50L+50O	4.92	50L+50M	477.0
Captain of Industry	13118	3	11636	25L+25J+25L+25P	4.99	100L	581.6
Imp. Captain Farry VII	12177	4	8197	67O+33P	5.22	33L+33N+33N	427.9

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Capt. Ito	R.G.A.S. 1815, P.S. 7146	3	9870	334 + 670 111 + 222M + 11N + 330 + 22P	5.10	334 + 333L + 333M	508.5
Capt. Robbie		9	9224		5.05	221 + 114 + 11K + 11L + 11M + + 22N + 11P	466.3 517.2 667.5 534.4
Capt. Robbie 2d	8166	4	10221	50L + 25N + 25O	5.06	25L + 25K + 25L + 25N	
Carranza of Maple Glen	3639	3	12043	334 + 33K + 33L	5.46	671 + 33K	
Cassiboro	7937	3	11184	334 + 33D + 33N	4.78	331 + 33N + 33O	
Casterillus	10980	18	9636	63 + 28L + 11N + 11O + 11P	4.84	61 + 64 + 17K + 17L + 17M + 11N + 11O + 17P	466.4
Casterillus of Nelsonville	18652	7	11611	111 + 114 + 43K + 11L + 14O	4.92	13K + 14M + 13N	571.3
Castor of Fern Ravine	13398	3	11559	331 + 33M + 33O	5.16	331 + 33J + 33O	596.4
Cato of Penoyd	11711	2	11786	50L + 50L	4.43	50M + 50P	522.4
Celosa's Glenwood of Sugar River	30628	2	12421	50L + 50K	4.78	50M + 50N	533.7
Celosa's Soapstone Lad	11275	3	10522	33K + 33L + 33N	5.07	334 + 33K + 33M	523.5
Champion of Homestead	5978	3	8702	33M + 67P	4.96	334 + 33M + 33N	431.6
Chancellor	6361	2	12685	50L + 50K	4.40	50M + 50P	558.4
Chandler's Sheld Anchor	12067	5	10514	20L + 10L + 30M + 40O	5.03	20L + 30L + 20L + 10O	528.9
Charles the Bold	10151	3	9517	33M + 33N + 33P	4.99	33K + 33L + 33M	474.9
Charmante's Rose King	11746	8	12289	131 + 384 + 25K + 13M + 13N	5.45	381 + 384 + 13K + 13L	669.8
Charmant 11th of the Giron	3124						
Charmant 7th of the Giron	E.G.H.B. R.G.A.S. 2532, P.S.	3	11085	331 + 33M + 33P	5.28	331 + 334 + 33O	585.3
Cheddai's Sequel	21912	2	13512	50L + 50M	5.40	100J	731.3
Cherbourg	14669	3	9029	33N + 33O + 33P	5.31	331 + 33K + 33L	479.4
Cherry Lad	19601	3	12659	50L + 50M	4.62	50M + 50O	584.8
Cherry's Lad of Lewison	14678	4	12349	50L + 50M	4.61	50K + 50P	573.0
Cherry's Memento of Iowa	27562	4	12834	50L + 25M + 25N	4.57	50L + 50P	586.5
Cherub's Winner	31180	4	11637	50K + 50L	4.77	50M + 50N	552.1
Chieftain	R.A.A.S. 62, P.S. 18419	4	11637	50L + 25L + 25M	4.73	50M + 25N + 25O	559.4
Chieftain of Les Chevaliers		2	8126	100P	5.05	50K + 50M	410.4
		6	11250	171 + 174 + 17L + 17M + 17N + 17O	4.92	171 + 174 + 33L + 17O + 17P	553.5

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Christie of Mt. Vernon	6956	2	10554	50L+50M	4.87	50L+50P	514.0
Christie's Combination	14651	9	9252	11K+11L+33N+11O+33P	5.14	22L+22J+11K+11L+22M+11N	477.1
Christy of Pinehurst	13619	2	10623	50L+50M	5.49	50L+50J	577.7
Christy of Pinehurst 31st	31981	2	9674	106N	4.79	50M+50N	463.4
Clairo of Maple Glen	10197	2	11230	100L	4.48	50M+50P	503.1
Clarence's Jeweller	9939	3	12093	67J+33L	4.49	33N+33O+33P	543.0
Imp. Clairvoyante's Sequel	21663	4	11427	25J+50K+25P	4.21	25K+75P	481.1
Imp. Clara's Sequel	29114	33	12337	30L+12J+21K+15L+6M+12N+3P	4.86	15L+9J+12K+18L+6M+3N+15O+21P	599.6
Imp. Clara's Sequel's Son	19741	3	12383	33J+33J+33N	5.12	33J+33L+33M	634.0
Chatford Espoire 2d	1913	2	13246	106J	4.50	50N+50P	596.1
Imp. Chatford Hero 2d	E.G.H.B. 22940	4	11141	25J+50M+25N	4.58	25M+25N+25O+25P	510.3
Chatford Hope 2d	1814	4	12199	25J+25J+25N+25O	4.81	25J+25M+25N+25O	586.8
Clora's Matcoln	19833	2	9750	50M+50O	5.59	100I	545.0
Claybanc	4951	2	10665	50K+50N	6.06	100I	646.3
Cock of the South	R.G.A.S. 1539 P.S.	3	10077	33L+33M+33O	5.13	33J+33J+33P	517.0
Imp. Cock of the Walk	8116	3	11224	33J+67P	5.07	33J+33K+33M	569.1
Cocot II.	R.G.A.S. 2007 P.S.	3	8132	67O+33P	5.47	33J+33J+33L	444.8
Coliseum	10925	5	10149	20K+20L+20N+40O	4.88	20I+60M+20P	495.3
College Pride	24618	2	11014	100L	5.19	50I+50M	571.6
Colonel	R.A.A.S. 95 P.S.	4	8848	67O+33P	4.89	25J+25K+25N+25O	432.7
Columbia	R.G.A.S. 1185 P.S.	3	10860	33K+67M	4.83	33K+33J+33O	522.1
Combination of Maplehurst	10769	2	8810	50M+50P	5.28	50J+50K	465.2
Commodore Lincoln	19682	2	9748	50M+50O	4.40	50O+50P	428.5
Comus	2428	3	9523	33J+67P	5.48	33J+67J	521.9
Conqueror	R.A.A.S. 71 P.S.	5	9866	40K+50N+40P	4.96	20J+20K+20L+40N	489.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Imp. Conqueror of Edgewater	21245	3	12118	33J+33K+33L	4.71	33K+33M+33P	576.8
Couyers Don Zaro	16785	4	10980	25J+25L+25M+25N	4.74	25L+25M+25N+25P	520.5
Coquette's Masher	14656	6	9898	17J+33M+17N+17O+17P	4.71	17J+17L+17M+17O+33P	466.2
Coralette's Son	3987	12	7968	25N+17O+48P	5.09	80+8P	405.6
Corabnan	3193	2	11610	50I+50O	4.57	50N+50O	530.6
Coru's Governor King of Chilmark	27641	2	10442	100M	5.04	50K+50L	526.3
Imp. Coru's Governor of Chilmark	8971	40	11586	20I+15J+20K+15L+10M+5N+8O+8P	4.91	13I+8J+8K+18L+13M+23N+15O+5P	568.9
Coru's King of Bellevue	9779	9	12141	11I+33J+22K+22L+11O	4.75	11K+33M+22N+33O	576.7
Coru's Lester	17178	2	10374	50K+30N	4.99	50J+50N	517.7
Coru's May King of Chilmark	23465	2	10653	100M	5.10	50K+50L	512.7
Corbin of Hickory Grove	37223	2	11512	50K+50L	4.85	100M	558.3
Coronation King	R.G.A.S.						
Coronation King III.	1317 P.S.	4	10613	56J+25O+25P	4.98	25I+25L+25N+25P	528.5
Coronation King IV.	1556 P.S.	3	10516	67K+33P	4.80	33J+33N+33O	504.8
Coronation King V.	1704 P.S.	3	11287	67K+33M	4.82	33I+33M+33N	544.0
Couleir's Sheet Anchor	13499	2	11830	56J+50L	4.54	50M+50P	537.1
Council of Birchwood	16377	2	9695	100N	4.68	100N	453.7
Count Bishop	4366	4	7826	25O+75P	5.25	75J+25N	410.9
Count Fritts	4748	3	9790	67M+33O	4.66	33M+33N+33P	456.2
Count Lenan	3516	2	9464	50M+50O	4.83	50K+50O	457.1
Count of Chilmark	11364	2	11266	50J+50N	4.65	50N+50O	523.9
Count of Fenimore	6603	3	9727	33M+33N+33O	5.22	67J+33I	507.7
Country Lad	10873	2	12846	50I+50K	4.83	50I+50N	620.5
Craigston May Rose King	19663	5	11221	33J+33M+33N	4.90	33K+67M	549.8
Craigston Moor Karitan	24912	3	9773	33K+33N+33P	5.45	67I+33K	332.6
Curragmore	4369	3	9512	100N	4.66	33K+33I+33P	443.3
Dairymaid's Choice of Pinehurst	13618	12	10624	8I+33L+25M+33N	4.73	8J+8K+8L+25M+8N+33O+8P	502.5
Dairymaid's Criterion of Iowa	28187	5	13122	40I+20J+40L	4.82	20I+20J+30M+20O+20P	632.5

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Dairymaid's Glenwood of Edgemont	22356	4	10812	251+251L+25N+25O	5.04	251+25K+25N+25O	544.9
Dairymaid's Glenwood of Picheurst	10548	5	12658	401+204+201L+20O	4.66	20K+60N+20P	589.9
Dairymaid's Glenwood of Picheurst, 3d	26948	6	12824	331+331+17K+17M	4.78	174+171+17M+330+17P	613.0
Dairymaid's Glenwood of Picheurst, 8th	39900	2	14469	1001	4.53	50M+50P	655.4
Dairymaid's King	12808	11	11025	181+36K+9L+9N+9O+	4.79	27K+18M+36N+18P	528.1
Dairymaid's Nonpareil of Iowa	26763	2	14486	501+50L	5.33	100J	772.1
Dairymaid's Pride of Iowa	14941	12	10698	171+8J+17K+25M+	4.90	331+8K+8L+8M+17N+	536.5
Dairymaid's Prince	26353	2	14219	1001	4.89	80+17P	695.3
Dairymaid's Rouge of Iowa	24845	4	12441	251+251+50L	4.77	251+25J+50P	593.4
Dairymaid's Standard of Iowa	28946	3	10602	33K+33L+33N	4.83	67M+33N	512.1
Daisy Mahy's King	22148	5	10537	40K+20L+20N+20O	5.30	401+26J+40K	569.0
Daisy's Hugo	11020	4	10372	25J+50K+25O	5.02	50K+25L+25M	520.7
Daisy's Sequel of the Roque Balan	R.G.,A.S.	2	9689	50M+50O	4.64	50K+50P	449.6
Daisy's Valentine	2458 P.S.	9	10634	33K+44L+22N	4.79	11K+22L+22M+33N+11P	523.7
Diamond of Whitford	16603	2	11863	501+50N	4.36	50M+50P	517.2
Dandy Jim of Maple Glen	19149	2	7562	100P	5.19	501+50O	389.4
Dandy of Beirnotown	7415	6	9310	17M+33N+33O+17P	5.01	171+33K+17L+17N+17P	466.4
Dan Patch	29963	7	10120	14J+29L+14M+29O+14P	5.09	43L+201+14M+14N	515.6
Dan Patch of the Isle	21293	3	9489	33L+67O	4.71	33K+33N+33P	446.9
Dimp, Darcy	19002	3	10543	50K+50L+40M+20N	5.01	501+40K+20N+20O	528.2
D'Arcy	R.G.,A.S. 5727 P.S.	2	10907	50K+50N	4.94	501+50O	538.8
Deanie's Jewel	1790 P.S.	3	9489	33M+33N+33O	5.07	33K+67L	481.1
Deanie's Raymond of Lewison	13250	4	12380	75J+25M	4.73	25L+50N+25O	585.6
Deanie's Rose King	17773	5	8764	20N+40O+40P	5.54	601+20M+20N	485.5
Dimp, Deanie's Sequel	14630	4	10402	50K+50O	5.05	501+25M+25P	525.3

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Dean's Squire	R.G.A.S. 2734 P.S.	15	11252	13I+33J+7K+7L+7M+ 13N+7O+13P	4.76	13I+13J+13L+13N+20O +27P	535.6 646.8 536.1 461.3
Dean's Sultan	9910	2	13227	50I+50L	4.89	100M	
Dean of the May	21815	3	10765	44K+22L+11N+22O	4.98	11J+44K+22M+22N	
Dean of the Springs	10446	3	9171	33L+33N+33P	5.03	67J+33O	
DeFense	R.G.A.S. 2152 P.S.	7	11579	29I+14L+29M+14N+14O	4.96	14I+29J+14L+14N+14O +14P	574.3 571.5
Demonstrator of Roughwood	23133	10	10907	16J+20K+36L+30M+10O	5.24	20I+20J+50K+10M	
Deputy H. of the Quarters	R.G.A.S. 1818 P.S.	3	12763	33J+67L	4.95	33J+33M+33N	628.8
Derlinus	6643	5	9686	20K+60N+20O	4.58	40M+20N+20O+20P	443.6
Dewey of Riverside	5710	2	8850	50N+50P	5.24	50J+50K	462.7
Imp. Dewey's Star	26520	3	8902	33N+33O+33P	4.91	33J+33L+33P	437.1
Imp. Diamond of the Tertre	24878	5	10698	20I+20K+20M+40P	4.71	40I+20K+40P	503.9
Diamond 2d's Yeoman	10042	2	9254	50M+50P	4.75	50M+50N	438.6
Diavolo	R.G.A.S. 1858 P.S.	2	11183	50K+50M	5.48	50I+50N	612.8
Dido's Standard	7683	5	11119	46J+50M+40N	4.66	20K+40N+20O+20P	518.1
Digby-Hood	13940	4	9534	25L+25M+25O+25P	4.82	25I+50N+25O	459.5
Dimple Bloom	14369	6	11452	17I+17J+17K+17M+ 17N+17O			
Dimple Bloom of Edgemont	18226	2	9394	50N+50O	4.81	17I+17K+17N+50O	550.8
Dimple Bloom of Wellersville	22580	3	9869	33L+33N+33O	5.03	50I+50N	472.5
Dimont	14235	2	13506	50I+50O	4.63	33I+67O	496.9
Distinction	11490	3	10780	33I+33N+33O	4.60	30N+50O	621.3
Divan	5846	4	12874	25I+25J+25K+25P	5.42	33I+33J+33K	584.3
Dolly Dimple's May King of Langwater	1997	7	12507	43I+14J+14L+29P	4.77	25I+25M+25N+25O	614.1
Dolly's Roy of Tarbell Farms	26202	3	10401	33K+33L+33P	5.41	29I+43J+14K+14L	676.6
Don Adams of Linda Vista	26616	5	11465	20I+20J+20K+20N+20O	4.90	33K+33I+33O	509.6
Donald Bell	12646	2	13170	50I+50K	4.65	20K+20I+20N+40P	533.1
Donald of Ellenwood	16329	3	9887	33K+33N+33P	4.14	100P	545.2
					4.72	33K+33N+33P	466.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Don Bernardo of Linda Vista	20317	3	11808	33I+67L	5.22	33I+67K	616.4
Don Diavolo of Linda Vista	25565	3	13679	33I+33J+33K	4.48	33M+33O+33P	612.8
Don Filippo of Linda Vista	25544	2	10074	50K+50O	4.70	100N	473.5
Don Iago of Linda Vista	28887	2	11733	50J+50M	5.09	50I+50N	597.2
Donnington Jack	2128	4	12538	25I+25L+25O+25P	4.81	25J+25K+25O+25P	603.1
E.G.H.B.	21166	3	13763	33I+33J+33K	4.36	33O+37P	600.1
Don of the Grove	24470	3	11564	33I+67L	5.53	67I+33N	639.5
Doer's Boy of Sunny Valley	204 P.S.	2	13444	50I+50J	4.82	50I+50P	618.0
Douglas of Dairy Farm	R.A.A.S.	3	10333	33I+33M+33N	5.21	67J+33M	538.3
Douglas of Sunny Valley	21291 P.S.	2	11986	50I+50L	4.83	50I+50N	576.5
Druce's Park Ranger	R.G.A.S.	2	8338	50O+50P	4.89	50K+50N	408.7
Du Chatel	1991 P.S.	2	7927	50O+50P	5.62	50I+50K	445.5
Duke of Broadview	3111	2	7826	100P	5.44	50I+50L	425.7
Duke of Daisydale	5172	2	11580	33I+33L+33N	5.34	33I+33J+33L	618.4
Duke of Edgewater	12340	3	9371	50M+50O	4.74	100N	444.2
Duke of Hardwick	6436	2					
Duke of Moultrie	R.G.A.S.	2					
Duke of Rib Hill	2045 P.S.	9	11118	11I+11J+11K+33L+11M+22O	4.86	22I+11K+11I+11M+22N+11O+11P	540.3
Duke of Rusk	17263	3	11474	33I+33K+33O	4.43	33M+33N+33P	508.3
Imp, Duke of the Grandes Capelles	13029	4	9801	25J+25I+25O+25P	4.87	25I+25J+25N+25P	477.3
Duke of the Rochers	15324	4	11156	50K+25M+25N	4.59	25M+75O	512.1
Duge of Waunreist	R.A.A.S.	4	10407	25I+25K+25O+25P	5.28	50I+25I+25M	549.5
Duke S. of Fernwood	913 P.S.	10	11480	26I+26J+40M+10N+10O	5.09	10I+10J+40K+10L+10M+10N+10O	584.3
Bumont's Hero	8350	3	9384	33M+33N+33O	4.59	33M+33O+33P	430.7
Bumont's Sequel	18852	2	13189	50I+50L	4.74	50J+50O	730.0
Buncan Cole of Westwood	16354	5	9964	20I+40N+40O	5.30	40I+20K+40M	512.2
	15010	2	9467	50M+50O	4.99	50K+50M	472.4
Peckstein	16828	5	11845	10J+60L	4.65	20J+20K+60P	550.8

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Ednwood's Knight	10821	2	10249	50K+500	4.49	50M+50P	400.2
Imp. Emblem of France	21186	2	9774	100N	5.20	50I+50N	508.2
Emblem of France II	R.G.A.S.						
	3246 P.S.	3	12005	67J+33N	4.59	33K+33O+33P	551.0
Emerita 2d's Son	16157	3	10686	25J+25L+25N+25O	4.65	25L+25N+25O+25P	496.9
Eminent of Sarnia	32963	4	14091	75I+25J	5.04	50I+25L+25O	710.2
Emma's Dick	9586	2	11426	33I+33J+33P	4.69	33I+67P	535.9
Imp. Emperor's Harvest	12180	2	12175	50I+50M	4.66	50M+50O	567.4
Endymion	3810	13	11694	8I+15J+15K+38L+8M+15O	4.81	8I+15K+8L+15M+15N+31O+8P	562.5
Erminia's Governor	13504	2	9725	50M+50N	5.00	50I+50O	486.3
Erwin of Canonsburg	4843	3	9303	33M+33N+33P	5.24	33I+33J+33M	487.5
Espanore 2d	5902	5	9070	20L+60O+20P	4.93	20I+20K+20M+20N+20O	447.2
Esquire of Lindon	6673	5	8738	20M+50N+20O+40P	4.88	20J+20K+40N+20O	426.4
Engine F. of Holliston	23145	3	11865	33J+33K+33M	4.51	33M+33O+33P	535.1
Evaline's Yeksa	10967	2	9432	50L+50P	5.52	50I+50M	520.6
Eva's Pretor	14023	3	10322	35J+33N+33O	4.27	33N+67P	440.7
Eva's Sequel	21588	3	12803	67J+33L	4.87	33L+33M+33N	539.2
Evergreen Sequel	32288	3	13147	67J+33K	5.47	67I+33J	719.1
Imp. Ivory	3977	3	8797	100O	5.22	67J+33L	459.2
Excelsior of Linwood	27513	2	10224	50L+50N	5.52	50I+50J	564.4
Ezalia's Glenwood Boy of Ingleside	13544	5	10019	60L+20O+20P	4.66	20J+20N+40O+20P	466.9
Fair Boy of Seagrove	1564						
Fair Lad of Hickory Grove	E.G.H.B.						
Fairview Duke	22002	2	12351	50I+50P	4.52	50N+50P	538.3
Imp. Fanny's Star	7269	4	10849	50K+50M	4.28	25O+75P	464.3
Fandaph of Williswood	19564	2	9732	50L+50O	5.37	50I+50L	522.6
Fanny's Raynold	7199	4	11022	25J+25K+25M+25O	4.81	25K+50M+25O	530.2
Imp. Fanny's Sequel	29238	2	10783	50M+50M	4.69	50M+50O	565.7
	19563	24	10590	13I+8J+8K+13L+13M+8N+25O+13P	4.65	50K+50P	433.7
Fashion Plate's May King of Linda Vista	18616	2	12722	100J	4.49	8K+8L+4M+13N+29O+38P	475.5
					4.55	50N+50P	578.9

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Faucette's Prince	10310	3	9835	33L+33M+33P	5.33	33I+33J+33K	529.1
Fenimore Prince	4559	4	9288	25L+25M+50P	4.96	50J+25M+25P	465.6
Ferndale King	14772	2	9980	50M+50N	5.03	50K+50L	502.0
Ferndale's Fern	13721	4	10867	25I+25J+25N+25P	4.83	25I+25J+25O+25P	524.9
Fernwood Lily's Son	3983	6	11924	17I+17J+17K+17L+33M	5.03	33I+17I+17M+17N+17O	599.8
Fernwood of Honiestead	7448	8	12909	25I+33K+13L+13M+13O	4.61	13J+13K+25N+13O+38P	562.8
Filius	4397	2	9858	50I+50N	4.84	50K+50O	477.6
Filmore's Sultan	9117	3	11831	33I+33K+33O	4.70	33J+33O+33P	556.1
Imp. Financier	8571	9	10869	9I+18J+9K+18M+18O+9P	4.93	18I+18J+9M+9N+9O+18P	532.9
Financiere III's May Rose King	13028	3	13444	33I+33J+33K	4.80	67M+33N	645.3
First of Glyndwr	5641	3	11243	33J+67M	4.90	67J+33M	550.9
Fisherman's Chief of Rockstone	38373	2	9494	50J+50P	5.56	50I+50L	327.9
Flash of Fenimore	6002	2	9663	50M+50O	4.75	50M+50O	439.0
Fleur-de-Lys	E. G. H. B.						
Imp. Floek's Head of Pulus	1565	5	12109	20I+40J+20L+20N	4.88	40I+20N+70O+20P	590.9
Flora's Raymond	11374	3	10875	33K+33L+33N	4.84	33J+33N+33P	526.4
Flora's Raymond	R. G. A. S.						
Imp. Flora's Sequel of Vimiera	2914, P. S. 25905	14	10674 12662	29I+36J+7K+7L+7N+14O	5.43	33I+67K	579.6
Imp. Flora's Sequel II. of Vimiera	28603	11	11029	18I+18K+18L+9M+18N+18P	4.91	21I+7J+7L+14M+20N+14O+7P	621.7
Florham Autoerat	25749	4	13026	50I+25K+25L	5.03	9I+27J+9K+27M+27N	554.8
Florham Golden Lad	18119	6	11346	17I+17J+17K+17L+17N+17O	5.25	25I+50J+25M	633.9
Imp. Florham Governor	10213	2	14152	50I+50P	4.88	17I+17J+17K+17N+17O+17P	553.7
Florham Laddie	20431	16	11597	13I+31J+13K+6L+6M+25N+6O	4.89	50L+50N	692.0
Florham Monarch	20771	8	10653	25J+13L+50M+13O	4.99	6I+19I+35K+13L+13M+6N+13O+6P	578.7
Florham Noble	14734	3	12475	33I+33J+33M	5.16	25I+13I+13K+13L+13M+13N+13O	565.2
					4.50	67N+33P	561.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Florham of the Elms Fond du Lac Boy Forest Champion	14697	3	10407	33K+33L+33O	6.12	1001	636.9
	19437	3	8503	33N+67P	5.00	33K+33L+33M	425.2
	R.G.A.S. 1789 P.S.	2	10634	50K+50N	4.88	50K+50N	518.9
Foulon Raymond of Meadowsweet Four Hundred, Jr. Imp. France's Honeymoon's Sequel France's Jewel II	17256	6	11995	33I+17J+33K+17P	4.90	33I+17M+50P	587.8
	10616	4	9718	23I+25M+25N+25P	5.12	25I+50K+25M	497.6
	13485	4	10230	25K+25L+25N+25P	4.40	25N+25O+50P	450.1
	R.G.A.S. 1065 P.S.	4	10648	50K+25M+25O	4.72	25K+25L+25O+25P	502.6
Imp. France's Jewel V Imp. France's Jewel VII Imp. France's Jewel VIII Imp. France's Jewel IX Imp. France's Jewel XI France's Jewel XVI	11396	7	9980	11I+57M+14N+14P	4.42	14L+29O+57P	441.4
	10564	4	6389	25I+25N+25O+25P	4.79	25L+25M+25O	449.7
	11251	7	10957	29J+29K+14M+14O	4.58	14L+14M+29N+14O+29P	501.8
	11368	3	8904	33M+33O+33P	4.88	33I+67M	434.5
	13283	9	9445	11I+33M+44O+11P	4.57	22M+22N+33O+22P	431.6
	R.G.A.S. 2888 P.S.	2	10275	50K+50O	4.68	50M+50O	480.9
	17970	5	12559	60I+30M+30N	4.67	20K+50L+20M+40P	586.5
	7248	10	10716	10J+30K+10L+20M+20O+10P	4.77	10I+10K+30M+20N+20O	
	Imp. France's Jewel V Imp. France's Masher 2d	7748	2	8898	1000	4.81	50M+50N
12948		3	9813	33J+33O+33P	4.37	33J+33K+33O	428.0
21901		4	10572	25I+25K+50O	4.54	25M+50O+25P	487.7
26342		8	10007	13J+38L+25O+25P	5.28	25I+13J+50K+13M	490.0
12418		2	13848	50I+50N	4.62	50N+50O	528.4
12754		2	9147	50N+50O	5.07	50K+50L	639.8
11413		3	11469	33I+33K+33O	5.28	607.1+33L	607.1
10096		3	8045	33M+67P	5.26	33I+33J+33O	470.5
R.G.A.S. 1670 P.S.		2	10831	50K+50N	5.44	50I+50J	589.2
5943		2	10243	50K+50O	5.20	50I+50M	532.6
Fred of Ceel Freedom	58 P.S.	10	9576	10K+20M+40N+10O+20P	4.87	20I+10L+30M+40O	466.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Freedom Sly of the Bordages	R.G.A.S. 1758 P.S.	3	9719	33J+67P	5.06	32J+33K+33M	491.8
Free Lance	R.G.A.S. 1803 P.S.	4	10696	25J+25K+50O	4.50	25L+25N+50P	481.3
Fresco	R.G.A.S. 7907	4	9330	50M+50P	4.75	50L+50O	443.2
Frolie 5th	E.G.H.B. 612	2	8306	50K+50L	4.99	50J+50N	414.5
Gabriel of Arcadia	22562	2	11111	50M+50N	4.37	50K+50P	485.6
Galaxy's Butter King	20753	2	9652	50M+50N	5.18	100K	500.0
Imp. Galaxy's Lavinius	12548	17	8897	18L+6M+18N+21O+35P	5.03	12L+20J+12L+18M+12N +12O+6P	447.5
Imp. Galaxy's Sequel	16904	46	10612	13I+4J+15K+13L+13M +11N+13O+17P	5.00	15I+15J+20K+9L+15M +6N+11O+9P	530.6
Imp. Galaxy's Sequel II	18991	2	9421	50M+50O	4.93	50J+50O	464.5
Imp. Galaxy's Sequel's Royal Gem	16925	3	12017	35J+33K+33L	5.01	33I+33J+33O	602.1
Garcon de Rouvets	16995	4	11322	25J+50K+25N	4.61	25L+25M+25O+25P	521.9
Gaut's Raymond of Richland	21432	2	13103	50I+50K	4.22	50N+50P	552.9
Gay Boy	R.G.A.S. 2051 P.S.	2	10710	50J+50O	4.27	50O+50P	457.3
Gay Boy IV	R.G.A.S. 3102 P.S.	3	11621	33I+33K+33P	5.12	33J+33M+33N	595.0
Imp. Gay Boy of the Isle	16968	17	11189	12I+18J+12K+21L+6M +24N+6P	5.21	20I+24J+12K+12L+12M +6O+6P	582.9
Gay Lad du Braye	R.G.A.S. 2026 P.S.	15	11335	7L+27J+20K+7L+13M +20O+7P	4.93	20I+7J+7K+13L+20M+ 13N+20P	558.8
Imp. Gay Lad II, du Braye	12649	3	13262	33I+67J	4.72	33M+67N	626.0
Imp. Gay Lad III, du Braye	17132	2	10893	100L	5.06	50K+50L	551.2
Gay Lad of Whitewater	11028	2	9132	50M+50P	4.88	50K+50N	445.6
Gay Lad's Hero	R.G.A.S. 2514 P.S.	9	10124	22K+11L+22M+11N+ 22O+11P	4.97	22J+22K+22L+11M+11N +11P	503.2

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Gen. Cronje	7052	2	11040	504+500	5.37	501+50K	592.8
General Bay	16177	2	10361	50L+50N	4.82	50K+500	499.4
General Blueher	5893	2	11172	100L	4.93	50K+50N	550.8
General Hale	10959	2	11141	50K+50M	4.51	50L+50P	502.5
Imp. General of the Obolins	12184	3	9134	53M+67O	4.73	33L+33M+33P	432.0
Gentleman Bay	24821	2	8257	100P	4.06	50M+50O	384.8
Geoffrey of Grasslands	14661	2	12029	50J+50K	4.23	100P	508.8
George Washington of Fairfield Farm	10866	11	9803	184+9M+18N+45O+9P	5.11	91+94+27K+27L+18M+9N	500.9
George Washington of Haddon	8499	7	9774	14K+14L+14M+14N+14O+29P	4.81	14J+71M+14O	470.1
George Washington of Maple Farm	20863	6	11538	17L+33K+17L+17M+17N	5.49	50L+33J+17L	633.4
Giftidge of Koshkonong Place	21989	15	11484	20L+20J+13K+13M+20N+13O	4.55	7K+7L+7M+13N+47O+20P	522.5
Gipsy King	9847	2	10084	50L+50O	4.80	50K+500	484.0
Gipsy's Jewel	10031	2	11444	50L+50O	4.65	50J+50P	532.1
Gleanor of Les Blancs Bois	R.G.A.S. 2250 P.S.	7	11467	29L+43K+29P	5.09	14L+14J+14L+23N+14O+14P	583.6
Glen Aurie of Pinehurst	13175	2	8735	100O	4.87	50K+50O	425.4
Glence's Canterbury	7728	7	8588	14L+86P	5.24	14L+43J+20L+14N	450.0
Glendett of Pinehurst	13001	5	11439	20J+40K+20L+20N	4.77	10L+20M+20N+20P	545.6
Glendett of Pinehurst 3d	19208	4	10553	25J+50L+25P	5.13	25J+50K+25N	541.4
Glenndon	4773	2	8494	50N+50P	4.75	50L+50O	402.0
Glen Haddon	10700	7	10554	14L+14J+14M+29N+29P	4.48	29M+29N+14O+29P	472.8
Glen Haddon 2d	14054	2	8079	50M+50P	5.34	50L+50O	431.4
Glen-Masher	8812	2	12786	50L+50K	4.68	50L+50P	598.4
Glenn Bush	21424	2	10010	50L+50O	5.06	50J+50M	508.5
Glenn of Birchwood	14749	2	10186	50M+50N	4.83	50J+50P	492.0
Glenn Rose of Beechwood	12772	4	11244	25J+25K+25L+25M	5.20	25J+50K+25L	584.7
Glenwood Bishop	9186	4	15320	100I	4.85	25L+25M+50O	743.0
Glenwood Bonny Boy	13034	3	9952	67M+33N	4.89	33K+33L+33O	486.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Glenwood Boy of Haddon	4605	24	10454	8I + 8J + 4K + 21L + 21M + 4N + 33P	4.90	4I + 12J + 17K + 17L + 12M + 21N + 80 + 8P	512.2
Glenwood Boy of Waukesha	15776	8	9383	13K + 13L + 13M + 13N + 50P	4.90	50J + 13M + 13O + 25P	457.8
Glenwood Chief of Cloverbrook	11158	3	11678	33I + 33L + 33N	4.69	33K + 33O + 33P	549.7
Glenwood Chief of Haddon	7076	3	9002	33M + 33O + 33P	4.91	33K + 33M + 33N	474.0
Glenwood Chief of Taylor	13221	8	9634	13I + 13L + 50O + 25P	4.92	38K + 13L + 25M + 25N	474.0
Glenwood of Maplehurst	10033	2	9183	50M + 50P	4.68	50I + 50P	628.8
Glenwood of Maplehurst 2d	14720	2	13171	50I + 50P	4.77	50I + 50O	628.3
Glenwood of Mapleton	9170	2	11334	50I + 50O	5.10	50I + 50N	578.0
Glenwood Marshall	7140	2	9281	50M + 50O	5.25	50I + 50K	488.2
Glenwood of Marshfield	21643	3	8065	33M + 67P	4.73	67L + 33P	410.0
Glenwood Meddler of Haddon	13748	3	10476	17I + 17M + 17N + 33O + 17P	5.25	33I + 17K + 33L + 17M	560.0
Glenwood of Sunny Valley	13840	4	12780	50I + 50M	4.37	25L + 75P	598.5
Glenwood Prince	9130	2	8264	50O + 50P	5.29	50I + 50P	437.2
Glenwood Rose of Bellmath	11737	6	10240	17K + 17L + 33M + 33O	4.98	33K + 50L + 17N	509.9
Glenwood's Champion	15639	24	10610	8I + 8J + 21L + 25M + 17N + 17O + 4P	4.99	12I + 21J + 21K + 8L + 4M + 8N + 12O + 12P	529.4
Glenwood's Combination	8927	4	11203	25I + 25M + 25N + 25P	4.66	50M + 25N + 25P	523.1
Glenwood's Combination 5th	11354	6	11176	17I + 33J + 17M + 33P	4.80	17J + 17K + 17L + 33O + 17P	536.4
Glenwood's Combination 6th	11797	2	10643	50J + 50P	5.03	50J + 50N	535.3
Glenwood's Combination 8th	12550	10	11105	10I + 10J + 30K + 20L + 10N + 10O + 10P	4.51	30L + 10N + 40O + 30P	500.8
Glenwood's Jeweller of Hollywood	14486	5	9698	40M + 40N	5.22	20I + 20J + 20K + 40L	521.9
Glenwood's King Coral	21027	2	11542	50J + 50M	4.25	100P	490.5
Glenwood's Main Stay	6067	23	10372	13I + 4J + 13K + 9L + 13N + 35O + 13P	4.68	4I + 9J + 4K + 4L + 22M + 9N + 4O + 43P	485.4
Glenwood's Main Stay 2d	7984	3	12644	33I + 33L + 33M	5.12	33I + 33L + 33M	647.4
Glenwood's Main Stay 6th	8611	7	8504	14M + 14N + 29O + 43P	5.01	14J + 29K + 43L + 14O	426.1
Glenwood's Main Stay 15th	9383	3	12705	33I + 33M + 33N	4.77	67M + 33N	606.0
Glenwood's Main Stay 16th	9384	9	12169	22I + 22J + 11K + 22M + 22N	5.03	22I + 11J + 33L + 11M + 11N + 11P	612.1

Table 5.—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Glenwood's Main Stay 18th	9860	4	9988	50L+25M+25P	5.34	50L+25K+25L	533.4
Glenwood's Main Stay 22nd	11133	4	11288	25L+50M+25P	4.74	25L+50N+25O	535.1
Glenwood's Main Stay of Ellenwood	19910	2	13179	60L+50L	4.76	50L+50O	627.3
Glenwood's Main Stay 8th's							
Lord Sherwood	14391	3	9545	33K+33O+33P	5.22	33L+33K+33N	498.2
Glenwood's Masher of Haddon	15529	5	12149	40L+20L+20M+20O	4.26	40O+60P	517.5
Glenwoodson	9738	3	9738	33M+67N	5.04	33L+33M+33N	490.8
Glenwood's Reputation	7087	17	11884	29L+12L+12K+6L+6M +18N+18O	4.63	6L+6J+6K+12M+6N+ 35O+29P	550.2
Glenwood's Stranford	9386	13	11234	23L+23K+15L+15N+8O +15P	4.96	8L+8J+31K+8L+8M+15N +15O+8P	557.2
Glenwood's Washington of Maple Glen	17902	2	9369	50M+50O	5.63	50L+50J	527.5
Glenwood's Winner of Haddon	7880	4	10508	50L+50M	4.81	25J+25L+25N+25P	505.4
Gloriana's King Masher	27645	5	13109	40L+20J+40K	4.49	20N+60O+20P	588.5
Glorious 24	14053	7	10035	14K+14L+20M+14N+ 14O+14P	5.39	57L+14J+14K+14O	540.9
Gold Basis	4660	2	7658	100P	5.24	50J+50K	401.3
Gold Coast	6311	2	8870	100O	4.72	50M+50O	418.7
Gold Dust's May King	24740	2	9180	50L+50P	5.61	50L+50J	515.0
Golden	R.G.A.S. 1908 P.S.	2	10917	50K+50N	4.54	50M+50P	495.6
Golden Anne's Fernwood of Honestead	11916	13	9771	8L+23L+15M+23O+31P	4.89	8L+15J+23K+8M+23N+ 15O+8P	477.8
Golden Bob of Pencoyd	15823	8	11344	28J+35K+13L+25O	4.85	13L+13K+13L+13M+13N +25O	550.2
Golden Bo Peep	14106	2	7970	100P	5.68	100I	452.7
Golden Boy of Pencoyd	18896	2	11278	50K+50M	4.86	50J+50P	548.1
Golden Chilmark	15126	2	11842	50L+50N	5.02	100L	594.5
Golden Count of Pencoyd	27846	2	13038	50L+50L	5.15	50J+50L	671.5
Golden Crest	7910	5	9281	20M+20N+60O	4.50	20L+10O+40P	417.6
Golden Dale	9870	2	9887	50M+50M	5.01	50K+50M	495.3
Golden Glenwood	10635	7	9940	14J+20M+14N+29O+14P	5.47	43L+43J+14M	543.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Golden Heir Apparent	12611	2	9963	50J+50P	5.65	50I+50K	562.9
Golden Hero of Beirnetown	25705	2	11765	50J+50N	5.53	50I+50J	650.6
Golden Hero of Grenwode	27634	3	10047	33K+33N+33O	5.29	33I+33K+33L	531.5
Imp. Golden Hero of l'Etienneville	12647	13	10947	8I+23J+15L+15M+15N+23O	5.14	15I+38J+8K+8L+8M+15N+8O	562.7
Golden Jewel of Les Galliennes	R.G.A.S. 2190 P.S.	2	8734	50N+50P	5.46	50I+50J	476.9
Golden King of Arcady	14815	4	9850	25J+50N+25P	5.31	50I+25J+25P	523.0
Golden Masher	10464	5	13044	40I+60K	4.60	20K+40N+40P	606.0
Imp. Golden Noble	10508	5	10957	20I+20L+20N+40O	4.86	20I+20K+20L+20O+20P	532.5
Golden Noble II.	R.G.A.S. 1836 P.S.	28	11946	32I+74+14K+11L+14M+14N+7P	4.88	14I+7J+14K+11L+7M+11N+18O+18P	583.0
Golden Noble 5th	2762	3	11273	33J+33K+33O	4.81	33I+33M+33O	542.2
Golden Noble of Craigamoor	E.G.H.B. 29215	2	12121	50J+50L	5.02	100L	608.5
Imp. Golden Noble of Waddington	27237	3	11324	33K+33L+33M	5.16	33J+33K+33L	584.3
Golden Prince of Oregon	11912	2	11171	50J+50N	5.56	50I+50K	621.1
Imp. Golden Secret	12589	14	10176	7I+14K+7L+14M+21N+7O+29P	5.30	43I+14J+7K+7L+14M+7N+7O	539.3
Imp. Golden Secret of Lilyvale	10028	22	13179	40I+13J+13K+4L+13M+9N+4P	5.10	9I+27J+13K+22L+22M+4O	672.1
Golden Secret of Pencoyd	23462	13	10673	15I+84+8K+15M+31N+8O+16P	4.97	15I+15J+15K+8M+15N+15O+15P	530.4
Gold Finder of Haddon	19038	2	10148	50M+50N	4.81	50M+50N	488.1
Goldheels	8321	3	10163	33K+33N+33O	4.68	33K+33O+33P	475.6
Gold Jassie's Julian	27404	9	14665	67I+11L+22K	4.88	22I+11K+22L+11N+33O	715.7
Gold Mine 2d	4225	3	8635	33N+67P	4.82	67M+33N	416.2
Imp. Goldseeker of Anna Dean Farm	26106	8	11991	13I+25J+25K+25L+13N	5.00	13I+25K+13L+25M+13N+13O	599.6
Gold Thistle	8676	4	13704	75I+25N	4.69	25J+25N+25O+25P	642.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Gold Tip	7332	2	12708	50J+50M	4.82	50J+50P	612.5
Goodwill's Hero	17073	6	9892	17J+17L+17M+17O+33P	5.13	17J+17J+17K+17L+33M	507.5
Governor Chene	14228	2	9729	50M+50O	5.25	50J+50L	510.8
Governor of Bailey Falls	36994	2	12843	50I+50M	5.42	50I+50K	696.1
Governor of Balmoral	R.A.A.S.						
Governor of Beaumont	151 P.S.	2	8061	50O+50P	4.99	50K+50M	402.2
	R.G.A.S.						
Imp. Governor of Beauregard	3342 P.S.	2	7903	100P	5.03	50J+50N	401.7
Governor of Carteret	24739	4	11164	25J+25K+25M+25N	4.98	25J+75M	556.0
	R.G.A.S.						
Imp. Governor of le Briquet	3421 P.S.	6	9444	17K+17L+17N+17O+33P	5.35	33J+17K+50M	505.3
Governor of Linwood	14832	3	11583	33J+33M+33N	4.87	33J+33M+33P	564.1
Imp. Governor of Myrtle Place II	24369	2	8805	50N+50P	5.36	50I+50K	489.6
Governor of Stanford	40985	5	9611	20I+40N+20O	5.07	40I+20M+20N+20O	487.3
Imp. Governor of St. Croix	18688	2	9688	50O+50M	5.01	50J+50M	485.4
Governor of the Barras	26358	3	11030	33I+33L+33P	5.30	33I+33J+33K	584.6
	R.G.A.S.						
Governor of the Bourg	3423 P.S.	2	13476	50I+50J	4.52	50M+50P	609.1
	R.G.A.S.						
Governor of the Chene	2290 P.S.	6	10033	17J+17L+23M+17N+17P	4.87	33J+17M+17N+17O+17P	488.6
	R.G.A.S.						
Imp. Governor I. of the Chene	1297 P.S.	97	10986	7I+11J+25K+10L+10M +10N+13O+6P	4.81	10I+8J+8K+11L+11M+ 9N+24O+18P	528.4
Governor of the Corbinex	10563	21	12217	24I+24J+5K+10L+5M +14N+19O	5.29	24I+33J+10K+14L+19M	646.3
Imp. Governor II. of the Gree	R.G.A.S.	2	12256	50J+50K	4.68	50M+50O	573.6
Governor of the Jaonnets	3302 P.S.	14	10314	14I+14K+7L+14M+21N +7O+21P	4.88	14J+20L+20M+14N+7O +7P	503.3
Imp. Governor of the Vauquiedor	R.G.A.S.	2	9935	50M+50N	5.15	50I+50N	511.7
	1451 P.S.	13	10948	8I+23J+8K+15L+8M+ 23N+15O	4.76	8I+8K+23L+8M+8N+23O +23P	521.1
Imp. Governor's Paget	39925	5	8929	20M+20N+40O+20P	5.10	20I+60K+20O	455.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Governor's Pearl	R.G.A.S. 3498, P.S.	2*	12286	60J+50K	5.22	50J+50L	641.3
Governor Stonecrest	6487	3	8389	33N+33O+33P	5.48	33J+67J	470.7
Imp. Governor's Whimsome	20189	5	12078	20J+20I+20K+20M+200	4.77	20J+20N+60O	576.1
Grafton of Upton Pyne	12627	3	10830	55K+67M	5.17	33J+33K+33M	559.9
Grand Rapids	10067	2	10005	50K+50P	4.84	50K+50O	484.2
Grasslands Dairyman	39161	2	12637	106J	4.52	100O	571.2
Grasslands' Durbar	21825	3	9520	33M+33N+33O	4.47	33N+33O+33P	425.5
Guernsey Champion	8218	2	11196	50K+50M	4.62	50M+50O	517.3
Guiding Star	12423	13	10250	15J+15K+8L+8M+15N +25O+15P	4.82	8J+15K+23M+23N+31O	494.1
Guilford's Prince	3965	2	9011	50K+50P	4.61	50J+50P	456.9
Gully's Duke of German	4645	2	8922	100O	5.21	50J+50K	464.8
Guydette	3966	5	13251	40J+40J+20L	4.91	20J+20K+60O	652.1
Guydette Jr.	11405	9	11078	33J+11K+22L+11M+11O +11P	5.35	4J+11J+22K+11L+11M	552.7
Guyve	14861	2	12776	50J+50K	5.24	50J+50K	669.9
G. Washington of Mapleton	7281	5	8852	20M+20N+40O+20P	4.74	20J+20I+20M+40P	419.6
Gwendoline's Boy	7757	2	9683	100N	4.90	50J+50M	474.5
Gwendoline's Boy 2d	9183	2	8141	50N+50P	4.80	50L+50O	390.8
Gypson of Oakspring	11784	2	11555	100K	5.56	1J+50J	642.5
Gypson's Count	8125	15	8866	20M+13N+20O+47P	4.98	3J+20J+13K+20M+7N+ 13O+13P	441.5
Hailey Field	17171	6	9167	17M+17N+50O+17P	5.00	50J+50M	492.5
Halley	17344	4	11384	25J+50K+25O	5.11	50J+50M	553.1
Imp. Ham	3149	2	8087	100P	4.44	100O	645.8
Hanbury	R.G.A.S. 1424, P.S.	2	9675	50K+50P	4.85	50K+50O	390.6
Handsome Snowdoun	17707	2	10824	50L+50M	5.00	50J+50M	492.5
Harbor Hill's Linden	27831	2	14546	100I	5.11	50J+50M	553.1
Masher	11697	11	10424	9J+18K+18L+9M+27N +9O+9P	4.44	100O	645.8
Hardtaek of Grotton					4.70	27K+18J+9N+18O+27P	489.9
Harley of Chltral	R.G.A.S. 1182, P.S.	3	11866	33J+67L	5.29	33J+67K	627.7
Hawthorne of Ellerslie	5730	7	11228	45J+25L+14N+14P	4.38	14N+29O+57P	491.8

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Imp. Hayes Cherub 2d	25147	10	12819	301+36J+10K+20L+10M	5.11	101+50J+40K+30M+10N	655.1
Imp. Hayes Gay 3d	22241	3	13081	671+33M	4.77	33J+33M+33P	624.0
Hayes Golden 2d	19541	4	8624	25K+25O+50P	5.38	50J+25J+25M	464.0
Imp. Hayes Oliver	25149	4	12949	251+50J+25M	5.46	251+50J+25K	707.0
Imp. Hayes Prince of Spotswood	8129	2	14689	100J	4.98	50K+50M	731.5
Imp. Hayes Royal 3d	22237	4	13380	50J+25J+25P	4.92	25J+25L+25M+25P	658.3
Factor	R.G.A.S.						
	1325 P.S.	2	11588	50J+50O	5.30	50J+50O	614.2
Empress's King of the May	14470	2	8863	50N+50P	4.57	50N+50O	406.4
Henry S. of Sunnyside	5001	2	9824	100N	4.97	100L	488.3
Herines of Midvale	30655	2	7373	100P	5.64	100J	415.8
Hero des Hunguets de Bas	R.G.A.S.						
	1518 P.S.	2	10788	50K+50N	4.73	50M+50O	510.3
Imp. Hero of King's Mills Lodge	16906	7	12646	141+43J+14L+29M	4.52	14K+29N+29O+29P	571.6
Hero II. of Moulplied	R.G.A.S.						
	1786 P.S.	2	10986	50K+50M	5.06	50K+50L	555.9
Imp. Hero of the Courtil au Preel	13840	9	9571	22K+11L+11M+11N+11O+33P	5.35	41J+11J+22K+11L+11M	512.0
Hero of the Forest	R.G.A.S.						
	2053 P.S.	3	11057	33J+33M+33O	4.67	33K+33L+33P	516.4
Hero of the Poldevins	R.G.A.S.						
	1750 P.S.	4	11328	50J+50M	4.67	25J+25M+25O+25P	529.0
Hillside Glenduke	16002	2	11469	50J+50N	5.36	50J+50L	614.7
Imp. His Eminence	11602	4	11751	50J+25K+25N	4.62	75N+25P	542.9
Imp. His Excellency of Linda Vista	28886	3	12030	67J+33L	5.07	33J+33K+33N	609.9
Imp. His Majesty III	11211	4	9021	25L+25N+50P	5.03	25J+25J+50O	453.8
His Majesty of Trianon	12227	3	9753	50L+50O	4.53	100O	441.8
Imp. Holden IV	12179	7	14275	57J+14J+14K+14M	4.77	14J+14K+14M+57O	680.9
Hollyhook Lad	21597	3	10094	33K+33M+33P	4.53	33N+33O+33P	457.3
Homestead's Golden Duke	6506	3	7400	33O+67P	5.49	67J+33K	406.3
Homestead's Harry H.	20236	2	9983	50L+50O	5.10	50J+50O	509.1
Homestead's Prince	6337	2	9806	50K+50P	4.97	50J+50O	491.8
Honest Injun	9043	2	11296	50J+50P	4.69	100N	527.0
Honorita 4th's Main-Stay	4904	2	8720	50M+50P	4.77	50J+50P	527.0
Imp. Honorita's Sequel II	40668	7	11768	14J+25J+29L+14M+14N	4.73	14J+14K+14L+29O+29P	556.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Hopeful's Lord Mysie of Sitka	14219	3	9693	33L+33N+33O	4.56	33M+33O+33P	442.0
Hope's May Rose of Maple Hill	35903	4	9867	25K+25L+25M+25P	5.44	75L+25L	536.8
Hotton's Hero of Belmetown	25700	2	12011	50J+50M	4.72	50K+50M	548.3
Imp. Hotton's Major	14872	3	12964	33I+33K+33M	4.86	33K+33M+33O	596.0
Imp. Huntington	6040	2	9558	100N	5.47	50L+50L	522.8
R.G.A.S.							
2167 P.S.							
Ideal's Senator	14736	8	16717	100I	4.59	67N+33P	767.3
			10028	13K+35L+38O+13P	4.89	13L+25K+13L+13M+13N+25O	490.4
Ilderton	6173	3	9484	67N+33O	4.92	33J+33K+33O	466.6
Imogene's Jeweller	8249	3	8428	50N+50P	5.00	50K+50L	421.4
Imperial of Birchwood	19271	3	12872	33I+33J+33K	4.85	33J+33N+33O	654.3
Increase	12459	9	10304	22J+11K+11L+11M+11O+33P	5.30	22I+33J+22K+11L+11O	546.1
Infrangible of Oak Ridge	29037	2	9291	50M+50P	6.17	100I	573.3
Irene's King of the May	18816	6	13018	33I+17J+33L+17M	5.16	33J+17K+17L+17M+17N	671.7
Isaleigh Tarte	5653	2	9323	50N+50O	5.21	50I+50N	485.8
Imp. Island Champion	6363	2	11094	25J+13K+50M+13N	4.61	13I+13M+38N+13O+25P	507.3
Imp. Island Harvester	16907	2	10478	50K+50O	4.69	50K+50P	491.4
Imp. Island Helloom of Dentonia	7324	2	9642	100N	4.94	50L+50M	476.3
Island's Pride of Home Pector	27349	3	11704	33I+33K+33N	5.04	33I+33L+33M	689.9
Islesboro	7733	3	10439	33K+33M+33O	5.07	33K+67L	529.3
Itchen Daisy's May King of Langwator	17349	13	13350	46I+23J+15K+8L+8M	4.70	46I+23J+15K+8L+8M	626.5
Imp. Itchen Gold Raider	25040	2	12651	50I+50L	4.56	50M+50P	576.9
Imp. Itchen May King	25174	18	10864	11I+28K+17L+17M+5N+17O+5P	5.25	33I+17J+17K+17L+11N	570.4
Itchen May King of Stannox	34377	4	8992	25L+50O+25P	5.56	50I+50J	500.0
Imp. Itchen Red Raider	27342	4	11103	25J+25L+50M	4.82	50M+50N	535.2
Itchen Wrangler	E.G.H.B.						
	1757						
Ivy Leaf	R.G.A.S.		11006	33J+67M	5.63	67I+33J	619.6
	2197 P.S.		11354	14I+14J+29K+14L+14N+14O	4.64	29L+14M+29N+29P	536.8

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Jack bc Nimble	11688	3	12639	33L+33J+33N	4.56	1000	576.3
Jack of New Place	R.G.A.S. 318 F.S. R.G.A.S. 360 F.S.	2	10249	50L+50N	4.33	100P	413.8
Jack III of New Place	25564	4	10134	50L+25N+25O	5.59	50L+25J+25K	596.5
Jaqueminot of Linda Vista	20657	5	10730	20K+20L+40M+20N	4.73	40M+20N+40O	507.5
Jardinere's Masher	30152	11	14391	55L+36J+9M	4.65	18L+18M+9N+36O+18P	669.2
Jean DuLuth Dairyman	12071	2	9316	50N+50O	4.96	50K+50N	462.1
Imp. Jeannette's Masher's Sequel	23555	5	11319	20J+60L+20M	4.83	20L+40M+20O+20P	546.7
Jeddy	18984	3	9291	33L+33N+33P	4.69	33L+33N+33P	431.5
Jessy Rose's Pride of Iowa	11336	3	10574	67L+33N	5.25	60J+40J	555.1
Jethon	26305	5	9211	20M+20N+40O+20P	5.58	54+5K+5L+18M+5N+	514.0
Jethro Bass	18517	22	13716	55L+23J+14L+4N+4P	4.56	27O+36P	625.4
Jethro Bass of Barrymoor	14591	3	12336	100J	4.29	50O+50P	530.7
Jethro Sequel		3	12272	33L+33J+33M	4.72	67M+33O	579.2
Jethro's May King of Linda Vista		10	12475	30L+30J+40K+10L+10N+10O	4.87	10J+30K+20L+10M+10O+20P	607.5
Jeweller Boy of Maple Lane	14176	2	12908	100J	5.47	50L+50K	706.1
Jeweller of Sunny Valley	12952	2	10425	50J+50P	5.11	50K+50M	532.7
Jewel of Koshikonong Place	10324	8	8846	13L+13M+38O+33P	4.88	13K+13L+63M+13N	431.7
Jewels' Independence		10	13024	50L+10K+20L+10M+10P	4.69	10J+10L+30M+10N+20O+20P	610.8
Jewels' Independence of the Glen	26637	3	8900	67N+33P	4.85	33K+33M+33O	431.7
Jewels' Royal Combination of Waava	15655	9	10962	11J+33J+22M+33P	5.35	33J+11J+22K+22L+11N	586.5
Jim Marshall	8280	7	9238	11L+43J+43M	5.14	11L+29J+43L+14M	474.8
Jimmy Bates	12586	4	10401	23K+25L+25M+25P	4.51	25L+25M+50P	469.2
Jim of Edgewater	16384	3	9080	33N+67O	4.32	33O+67P	332.3
Jim of Newgrove	R.G.A.S. 1930 P.S.	8	10488	13J+25K+13L+13N+25O+13P	5.05	13J+13J+25K+25L+13N+13O	529.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocetes	Average daughters' butter-fat per cent	Ocetes	Average daughters' butter-fat (pounds)
Kedge Anchor of the Glen	13043	6	11406	17L+17L+33M+17N+17P	4.50	17M+32N+33O+17P	513.3
Kellynech	4982	4	10438	25K+50M+25O	5.11	56J+25I+25N	533.4
Imp. Kenilworth Gold	40380	2	9827	56J+50P	5.09	50I+50N	500.2
Keystone of Cornish	14072	2	8433	50M+50I	5.35	50I+50K	451.2
King Boda	17444	2	12695	50J+50K	4.37	50M+50P	580.2
King Bell	13482	10	12954	50I+10J+10K+10L+10M+10N	5.43	40I+30J+20K+10M	703.4
King Coral	5238	20	9666	10J+5I+15M+35N+20O+15P	5.09	20I+15J+20K+5L+15M+10N+5O+10P	492.0
King Edward 1st	R.G.A.S. 1334 P.S.	2	9945	50L+50O	5.09	50K+50L	506.2
King Edward of Fairview	8204	5	8208	20M+30O+60P	5.51	50I+20J+20M	452.3
King Fern	2612	4	8480	75O+25P	4.96	50I+50N	420.6
King Francis	13500	8	12891	35I+35J+13K+13N	4.77	13K+25L+13M+25N+25P	614.9
King Francis of Linda Vista	18618	4	12278	25I+25J+25K+25O	5.09	25I+25J+25N+25O	625.0
King Galaxy of Walter Maple	23720	3	12612	67J+33L	4.91	33I+67M	619.2
King Gracieux	15389	2	10603	50J+50O	4.83	50M+50N	512.1
King Masher	11084	11	14460	64I+18J+9K+9L	4.99	27J+27K+9L+9M+18N+9O	721.6
King Masher 5th	18361	13	11771	15I+23J+15K+15L+23M+3N	4.92	8I+15J+23K+8L+8M+8N+23O+8P	570.1
King Masher 8th	20673	6	10770	17J+17K+33L+17N+17O	5.18	17I+35J+17K+17L+17N	557.9
King Masher 13th	28170	2	12064	50I+50O	4.36	50M+50P	526.0
King Masher of Chilmark	27643	2	15477	100I	4.64	50I+50P	718.1
King Masher's King	21686	2	9366	100N	4.66	50O+50M	436.5
King Masher's Laddie	23467	2	12845	50I+50O	5.06	50I+50M	651.0
King of Birchwood	27366	2	13465	100I	4.84	50I+50N	748.5
King of Chilmark	20798	10	14317	70I+10J+20M	4.84	50I+50N	748.5
King of Fern Ravine	12511	3	11242	67K+33N	5.43	50I+20J+20K+10M	777.4
King of Medfield	15434	8	11170	13I+38K+25L+13N+13O	5.00	33J+33K+33N	562.1
King of the Friquet	R.G.A.S. 1674 P.S.	8	11170	67I+38K+25L+13N+13O	4.67	13I+13K+13N+38O+25P	521.6
Imp. King of the May	9001	4	12443	25I+25J+25L+25M	4.71	25L+25M+25N+25O	586.1
		29	14253	58I+17J+7K+7L+7M+3O	4.96	7I+7J+24K+14L+14M+10N+24O	706.9

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
King of the May's King	20489	2	10759	50K+50N	4.75	50L+50O	511.1
King of the Meadow	R.G.A.S. 1431 P.S.	3	10656	33K+33L+33O	4.72	33K+67O	503.0
King of the Meadow	25628	3	12228	33L+67L	4.40	33N+67P	538.0
King of the West	6320	2	12235	50L+50L	5.64	50L+50L	690.1
King of Vimera	R.G.A.S. 3431 F.S.	3	11588	33L+33K+33O	4.75	33L+33N+33O	550.4
King Royale of Fairview	18958	4	9631	25L+35N+50O	4.77	75M+25P	459.4
King Solomon of Elm Place	6704	3	11354	33L+33L+33N	4.30	33L+33M+33N	536.3
King's Vanguard	22719	5	12289	40L+20J+20M+20O	5.20	20L+20J+40K+20M	639.0
King Tallaleen of Chestnut Hill	13460	6	10470	17L+33L+33N+17P	5.16	17L+17J+33K+17M+17N	540.3
King William of Maple Ranch	14087	6	9596	17L+33M+17N+17O+17P	5.27	17L+33J+33K+17O	505.7
Kingwood Sheet Anchor	12720	2	9299	50N+50O	5.14	50L+50O	478.0
King Yeksa	5684	2	9538	100N	5.04	50K+50M	480.7
King Yeksa of Arborvitae	18777	2	13287	50L+50K	5.00	50K+50M	664.4
King Yeksa of Fern Ravine	12513	2	11424	50J+50N	4.35	50O+50P	496.9
Kitchener's Governor of Corona	19206	2	12051	50L+50N	5.28	50L+50L	636.3
Klondyke	R.G.A.S. 1063 P.S.	2	8399	50O+50P	4.63	50M+50P	388.9
Knight Errant	12928	4	10715	25L+25J+25N+25O	5.38	50L+25J+25K	576.5
Knight of Gold	10836	3	7388	67P+33O	5.57	33L+33L+33K	444.9
Kruger	6256	4	11638	25L+25K+25M+25P	4.87	25L+25K+25O+25P	566.8
Ladock Coronation	2471	4	11346	25J+50L+25M	4.96	25J+75M	562.8
Lady's Increase of Breeze Hill	E.G.H.B. 27735	7	9055	14K+14L+43O+29P	5.45	57L+14J+14L+14M	433.5
Ladysmith's Cherub	30760	4	12535	25L+25J+25K+25L	5.16	25J+50K+25L	646.8
Lady Vanity's King of Oak Lawn	23770	2	11059	50K+50M	4.47	50N+50P	494.3
Lake Chieftain	1955	2	13573	50L+50J	4.69	50M+50O	636.6
Landenberger	E.G.H.B. 2981	2	8208	50O+50P	4.95	50L+50O	406.3
Langwater Adventurer	23117	3	10659	67L+33M	5.33	33L+33J+33L	584.1
Langwater Advocate	20514	5	12072	20L+20J+20K+20L+20N	4.61	20M+40N+20O+20P	556.5
Langwater Athlete	16450	4	12276	50L+25K+25L	4.57	25J+25O+50P	561.0

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Langwater Cavalier	21012	10	12717	401+204+10K+10L+10N +110P	5.54	561+304+10M+100	704.5
Langwater College King	25837	2	11089	50K+50M	4.32	100P	479.0
Langwater Demonstrator	10451	30	10424	71+53+17K+13L+20M +10N+200+10P	5.24	271+374+10K+7L+10M +7N+30	546.2
Langwater Dictator	13068	11	9982	94+9K+9L+18M+18N +180+18P	5.18	184+364+9K+18L+9M+ 9P	517.1
Langwater Fashion	23660	4	12711	50L+25N+25O	5.31	251+504+25O	675.0
Langwater Fisherman	21873	7	10972	144+29K+43M+14P	4.91	144+29K+14L+14M+14N +14O	538.7
Langwater Frederick	22268	6	11730	171+17J+17K+17L+17M +17O	5.01	33J+17K+17L+17N+17O	587.7
Langwater Frechman	19226	18	11251	171+11J+17K+11L+11M +11N+50+17P	4.73	111+11J+6K+11L+17M+ 11N+17O+22P	592.2
Langwater Golden Secret	26510	8	12966	251+13J+38K+13L+13M	4.74	13J+13K+25N+50O	614.6
Langwater Hambro	21011	21	12345	191+24J+14K+19L+19M +5O	4.56	54+5K+14L+5M+19N+ 30+13P	562.9
Langwater Hayes Rosie's King of the May	16723	16	14792	631+19J+6K+13M	4.71	61+13K+13L+25M+6N+ 60+31P	686.7
Langwater Holliston	28055	5	14746	601+40J	4.90	201+40L+20M+20P	722.6
Langwater King of France	16724	3	13550	331+33J+33L	4.68	33L+33N+33P	634.1
Langwater May King	13001	19	12461	261+21J+32K+5L+5N +5O+5P	4.74	54+21K+11L+16M+5N+ 16O+26P	590.7
Langwater Modenes	10032	2	7880	100P	5.42	50L+50K	427.1
Langwater Monarch	20899	4	14942	1001	4.68	75M+25P	639.3
Langwater Peerless	19227	5	12169	201+40J+20K+20O	4.65	20J+20L+20O+40P	563.9
Langwater Pinceoy	21830	15	13952	531+27J+7K+7L+7M	4.73	20K+20L+27N+7O+27P	600.0
Langwater Prince Charmante	18714	5	11572	201+20J+40L+20O	4.65	40K+40O+20P	538.1
Langwater Princeling	14906	15	11452	71+27J+15K+15L+20M +7N+13O	4.30	53O+47P	492.4
Langwater Puritan	14252	3	9907	331J+33M+33O	4.97	33H+67N	492.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Langwater Raritan	17062	14	10970	7I+14J+14K+21L+14M+14N+14O	5.05	21I+14J+7K+14L+21M+7N+14O	554.0
Langwater Rival	14194	11	11785	27L+18J+9K+9L+18M+18N	5.32	36I+18J+18L+9N+9O+9P	627.0
Langwater Royal	14253	20	13185	30I+25M+15K+10L+15M+5P	4.56	5I+10L+5M+20N+35O+25P	601.2
Langwater Royal 2d	18319	5	12913	40I+40J+20N	4.70	50I+40N+20O+20P	606.9
Langwater Royalist	23121	3	9311	33L+33M+33P	5.43	67I+33K+20O+20P	505.6
Langwater Royal Master	23663	4	13302	25I+50J+25K	5.15	23I+25J+25M+25N	656.1
Langwater Sailor	20610	3	12235	33I+33J+33K	4.55	67N+33P	536.7
Langwater Stars and Stripes	21872	9	13595	33I+44J+33K	4.89	33K+22I+11M+22N+11O	604.8
Langwater Strongheart	10308	6	9625	17J+33N+17O+33P	5.35	33I+50J+17M	514.9
Langwater Sunderland	19237	3	11170	67K+33M	4.31	33N+67P	481.4
Langwater Warrior	26509	5	16395	80I+20J	4.55	60N+20O+20P	746.0
Lassie's Bob of Ledyard	14204	2	9469	100N	4.79	50I+50N	453.6
Lavanton	14540	7	11286	29J+29K+14L+14M+14O	4.89	14I+14J+14K+20N+20O	551.9
Laverna's Ultra May King	11611	10	12898	30I+20J+20K+30L	5.37	50I+10J+30L+10M	692.6
Lawton's Anchor of Sunnyside	24660	3	12559	33I+67K	4.85	33K+33M+33O	611.1
Lawton Standard	12466	2	10031	50K+30P	4.49	50N+50P	450.4
Le Bel des Gacheres	9128	2	9875	100N	5.19	50I+50L	512.5
Ledyard Bay	R.G.A.S. 2735 F.S. 11074	2 10	7700 12315	400P 30I+40J+10K+20L+10M+10P	5.34	50I+50K	411.2
Ledyard Bay 2d	19299	4	8934	25L+25N+50P	5.14	20I+40K+30L+10O	633.0
Ledyard Prince of Brookdale	24061	2	11767	50K+50L	5.36	25I+50K+25M	478.9
Lee Maplehurst	12718	4	9920	25K+25N+50O	4.82	100M	567.2
Le Grand Duke	6163	2	11520	50J+50N	4.79	25K+25L+25N+25P	475.2
Lehigh's Golden Emperor	15761	15	11205	7I+50J+20K+7L+7M+20N+13O+7P	4.63	50I+50P	533.4
Lena's Statesman	24744	3	11079	67J+33N	4.75	7I+20K+7L+27M+13O+27P	532.2
Lennard 2d	2162 F. G. H. B.	2	14344	50I+50J	4.87	33J+33L+33P	568.8
					4.26	100P	611.1

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Le Pierre of Hardwick	7386	2	8279	500+50P	5.13	500+50M	424.7
Le roi Lenfesty	7751	2	7735	500+50P	5.65	100P	437.0
Lester of Fern Ravine	16944	4	8698	25N+500+25P	5.30	15P+25A+25K+25L	461.0
Liberty Bluffer	20920	2	8239	50N+50P	5.81	100P	479.8
Lillian Glenwood's Benton	24531	5	12242	201+20P+20K+40L	4.57	2.0L+20N+20N+200+20P	559.5
Lilly Ella's Jeweller	5417	6	3572	17J+17N+500+17P	4.54	1.4M+33N+170+33P	425.5
Lilly Ella's Squire	6597	13	9747	6J+15K+15L+8M+8N+230+23P	5.22	31I+15J+15K+8L+15M+8N+80	508.8
Lily's Bonny Boy	2676	5	9778	20K+20L+20N+200+20P	5.07	5.0L+20L+40M+20N	495.7
Lily's Guido	10314	2	11026	50K+50M	5.47	50L+50M	663.1
Lily's King of Maplehurst	13010	2	9114	1000	5.71	100P	520.4
Lindo Bent'n of Inghelide	12155	3	11648	33I+33N+33P	4.85	33I+33N+33P	564.9
Lindyman	1650	4	9638	50M+25N+25P	4.85	5.5K+25L+25N+25O	467.4
Link	12361	2	9545	50M+500	5.91	50L+36J	564.1
Linnacus	4396	3	8191	330+67P	4.90	33N+33L+33O	401.4
L. L'Islet King	R.O.A.S. 1829 P.S.	2	13811	50L+50K	4.65	50M+500	642.2
Lieda's Masher of Bellmath	21614	2	10425	50K+500	4.95	50P+50N	516.0
Imp, Lord Butterfield	7651	5	11136	460+20K+20N+20P	4.88	20L+20K+20L+200+20P	543.4
Lord Derby of Paxtang	7744	2	11684	50L+500	5.03	50K+50L	587.7
Lord Fay	14207	3	10970	33J+33I+33N	4.75	33L+33M+33O	521.1
Lord Hardwick 2d	5981	8	9783	13J+13L+25N+500	4.68	13L+13K+25M+25O+25P	457.8
Lord Howe of Warren Wood	1962						
Imp, Lord Kitchener	E.C.H.B. 11369	2	8523	500+50P	5.27	50J+50K	449.2
Lord Lofly	2881	7	12732	29L+14J+29K+14M+140	4.69	14I+14L+14M+430+14P	597.1
Lord Lynden	15950	2	8191	500+50P	4.87	50L+50P	399.0
Lord Lynn	9744	2	10257	100M	5.33	33I+33M+33K	546.7
Imp, Lord Mar.	9744	2	10805	50K+50M	5.27	50J+50K	569.4
	14359	28	11250	18L+14J+18K+11L+11M+7N+30+18P	5.00	11I+7J+36K+21L+14M+11N+30+33P	562.5
Imp, Lord Mar V.	18061	3	10155	33L+33M+33N	5.14	33I+33L+33M	522.0
Imp, Lord Mar of the Prevosts	14833	5	11969	50L+40K+40L	5.12	20I+20J+40K+20P	661.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Lord Morvyn	R.G.A.S. 2574 P.S.	8	10270	13K+25L+25M+25N+ 13P	4.80	13J+13K+13L+13M+13N +25O+13P	483.0
Lord Orange of Waumesit	9658	5	9905	29K+40L+40P	5.22	50I+40J+20K+20O	517.0
Lord Roberts of Wheaton	7252	7	9612	14L+29M+29O+29P	4.82	29J+14K+14M+14N+29P	463.3
Lord Waukesha	10118	18	10675	6I+22J+6K+11L+11M +6N+23O+6P			
Lord Yeksa	6451	7	11524	14I+29J+14M+14N+29O	5.34	33I+39J+11K+6M+11N	570.0
Lord Yeksa of Lone Mound	10180	3	9591	47N+25O	4.73	14I+14J+11N+14O+43P	545.1
Lord Yeksa's Boy	28738	4	12621	23I+25J+50L	4.78	33L+67N	449.0
Lord Yeoman	18865	3	10636	33K+67N	5.05	50K+50L	637.4
Imp. Lover Bold	8400	3	9584	33I+33M+33P	4.35	33O+67P	462.7
Loyal of the Capelles	R.G.A.S. 1267 P.S.	7	10913	43J+14L+29N+14O	5.04	33I+33L+33O	483.0
Loyal II of the Gree	R.G.A.S. 1689 P.S.	5	12636	20I+26J+20K+20L+20M	4.91	14I+43L+29M+14P	535.8
Loyal of the Tertre II	R.G.A.S. 1784 P.S.	4	11945	25J+25K+50L	4.80	39K+66M+20O	577.7
Lucretia's Chief of Waumesit	R.G.A.S. 12385	10	10842	10I+10J+30L+10M+30N +10O	5.16	50I+50N	601.9
Lucretia's Glenwood Boy of Haddon	9264	2	8138	50O+50P	5.01	20I+20J+10L+10M+ 30N+10P	543.2
Lucretia's Son of Haddon	7575	2	11871	100K	5.27	50I+50L	428.9
Lucreceer	19856	2	10013	50M+50N	4.66	50M+50N	553.2
Lukes of Lindenwood	18184	3	9472	50J+50N	5.08	50I+50N	508.7
Lynchmere Lord Roberts 7th	3065	2	10376	56L+50P	4.39	33N+67P	415.8
Lynn Briggs	E.G.H.B. 20747	4	9067	1090	5.03	50J+50N	521.9
Madeline's Lord	9247	3	9011	1000	5.19	50I+50J+25O	470.6
Madison Des Fricquets	6400	2	8401	43N+67P	4.22	50L+50M	443.3
Imp. Maggie's Pride	18975	2	9734	50I+50O	5.07	33J+33L+33M	452.9
Magnet's Sequel of Keewaydin	22285	5	11623	20I+40K+20M+20O	4.80	100M	467.2
Magnus	9356	2	11413	50J+50M	5.47	40I+20K+20L+20N	635.8
Magnus Troll	15463	3	10427	67I+33N	4.55	50L+50P	519.3
					5.20	33I+33K+33L	542.2

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Maid's Honour	R. G. A. S. 2708 P. S.	5	11293	201 + 40L + 20M + 20P	5.01	40J + 20K + 20N + 20O	565.8
Maidstone	20428	7	10854	14K + 37L + 14M + 14N	5.18	231 + 20J + 14K + 14N + 14P	592.2
Main-Stay	3789	8	8950	43N + 130 + 25P	4.96	135 + 25K + 25L + 13M + 13N + 13O	443.9
Main-Stay of Belvan Heights	5804	5	12929	40I + 20K + 20L + 20M	4.37	20M + 80P	565.0
Main-Stay of Grenwode	14808	3	9414	43K + 330 + 33P	5.16	331 + 33L + 33M	485.8
Majesty of Ida Cottage	R. G. A. S. 1902 P. S.	6	10714	174 + 33K + 17M + 33O	4.70	17L + 33M + 17N + 33O	503.6
Major Lawton	8224	3	9227	33J + 330 + 33P	5.38	671 + 33M	496.4
Major Rhina	18791	3	11868	60J + 20L + 20P	4.91	20I + 20M + 20N + 40O	582.7
Malcolm of Maplehurst	5626	10	9052	20I + 30M + 100 + 40P	5.11	20I + 20K + 20L + 20M + 20N	462.6
Malcolm of Monmouth	10811	2	8268	100P	5.68	50I + 50J	469.6
Mambino	10085	3	15338	100I	4.64	67M + 33P	711.7
Manager	3365	2	9718	50K + 50P	4.84	50I + 50N	470.4
Manful of Prospect	22841	4	9794	25L + 25M + 50O	5.08	25I + 25J + 50N	497.5
Manoa	11687	3	11741	33I + 33K + 33P	4.65	67N + 33O	543.9
Maple King	22883	3	10449	50L + 50N	5.13	50I + 50M	536.0
Maple Lane's Duke	15680	2	10207	100M	4.73	50I + 50N	482.8
Marais Hero	R. G. A. S. 2287 P. S.	2	10611	50J + 50P	4.77	50M + 50N	506.1
Marcellus G.	9781	2	9803	50K + 50P	5.44	50I + 50K	533.3
Marcus's Glenwood of Pinchurst	11560	2	14028	100I	4.74	50M + 50N	604.9
Marcus Daly	10612	2	10389	50J + 50O	4.92	50J + 50O	521.0
Marcus Glenwood	13543	2	10981	100I	5.02	50J + 50O	551.2
Marilla's Gold Boy	13892	2	9716	50M + 50N	5.38	50I + 50L	522.7
Marnell	R. G. A. S. 69 P. S.	3	10915	67L + 33M	4.88	67L + 33N	532.7
Marquette	16510	6	16512	174 + 17K + 33M + 17N + 17O	5.15	17I + 33J + 17K + 17L + 17P	541.4
Marshall Holcomb	10287	4	10140	25K + 25M + 25N + 25P	5.31	25I + 25J + 25K + 25L	541.6
Marshall of France	10651	10	12570	20I + 10J + 40K + 30M	4.66	10J + 20I + 30N + 100 + 30P	583.8
Marshall of Waddington	14320	2	14783	30I + 50K	4.50	1000	665.2
Mars of Woodcrest	9290	9	11962	11I + 22J + 22K + 11M + 22N + 11O	4.86	11J + 33K + 22L + 11N + 22P	581.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
Masher	R.A.A.S. 63 F.S.	29	10268	71+17J+7K+10L+3M+ 21N+100+24P	4.66	3I+7J+17L+14M+10N+ 24O+24P 75N+25O	478.5 492.8
Masher Chilmark Masher of Rose Farm	19926 R.A.A.S. 75 P.S.	4 9	10620 10068	25K+50L+25O 11J+11K+11L+22M+11N +22N+11P	4.64		
Inp. Masher of Sarnia	19167	8	11318	13I+13J+13K+13L+25M +13N+13O	4.83	22J+11K+22L+11N+11O +22P	486.3
Masher of the Mill	R.A.A.S. 70 F.S.	2	10467	50L+50M	4.77	13J+13K+13L+25P+25M +13O	539.9 511.8
Masher Rockingham	31170	3	9713	33I+33N+33P	4.81	50L+50M 33K+33M+33N	511.8
Masher's Bonny Boy of Haddon	16454	2	10226	50K+50O	5.19	50L+50L	535.9
Masher's Chilwick	13129	2	11546	50J+50M	4.91	50L+50M	506.9
Masher's Elsie's May King	30630	3	12642	33I+33J+33M	5.47	61I+33J	691.5
Masher's Sequel Mapleton	18437	3	9069	33M+33O+33P	5.52	67I+33K	497.3
Masher's Flavinus	13796	3	7823	33O+67P	5.11	33J+33K+33L	399.8
Inp. Masher's Galore	8572	20	13087	35I+26J+10K+5L+20M +10O	4.65	15J+20L+20M+10O+35P 50K+25L+25M	608.5 607.0
Inp. Masher's Jewel Inp. Masher's Sequel	8868 11462	4 63	12091 11229	25J+25J+25K+25O 19I+14J+9K+13L+9M +13N+8O+14P	5.02		
Masher's Sequel 3d	12931	3	14000	67L+32I	4.51	2I+5J+6K+8L+11M+13N +14O+11P	514.3
Masher's Sequel of Barrymoor	23996	2	10415	50K+50N	4.35	67N+33P	658.5
Masher's Sequance	13778	3	12215	33I+33L+33M	4.88	50K+50M	515.5
Masher's Stowaway	25350	3	12244	67J+33K	4.73	33K+33M+33N	596.1
Masher's Victor	14662	2	7663	100P	4.90	33J+33M+33P	379.1
Masher Rose	9198	5	8513	20I+80P	5.11	50K+50N	375.5
Ma Ee O'Bloom	12633	5	10356	20K+50I+20M+20N+ 20O	5.17	50I+40J+50M+20N	435.0
Mand's Prince	6344	2	9639	50M+50N	5.17	20I+20K+40L+20O	535.4
Maximo	12204	8	10577	25J+13K+13L+25M+13N +13P	4.93	50K+50N	490.0
Maxim of Pinchurst	13614	5	11761	20I+26J+40K+20P	4.49	38L+13O+50P +9I+26J+20I+20N+20P	471.9 591.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Max of Thornwood 2d	13349	2	12429	100J	4.45	1000	553.1
Max of Thornwood 2d	19849	2	11359	50K + 50L	4.18	100P	474.8
Maxwell Valentine	16660	2	9552	50M + 500	4.87	56J + 560	465.2
May Boy of the Camp	R.G.A.S.						
	3374 P.S.	2	12668	56J + 50K	4.72	100N	595.1
May King of Fern Ridge	17432	2	12984	50L + 50K	4.60	50M + 50P	597.3
Imp. May King of Frie Baton	21184	6	10577	17I + 33K + 17M + 170 + 17P	5.29	33I + 17J + 17K + 33L	559.5
May King of Ingleside	12558	21	10384	10I + 19K + 10L + 14M + 14N + 290 + 5P	4.91	14I + 10J + 14K + 19L + 10M + 5N + 50 + 24P	569.9
May King of Langwater	13000	2	12116	56J + 50L	4.64	50N + 500	562.2
May King of Lhuda Vista	17946	14	11367	14I + 21J + 7K + 14L + 7M + 21N + 140	4.94	7N + 14J + 7K + 21L + 14M + 21N + 70 + 7P	561.5
May King of Maplehurst	16650	2	11252	50I + 50J	5.75	50I + 50J	819.5
May King of Maudsleigh	16744	4	12184	25I + 25J + 25K + 25L	5.45	50I + 50J	664.0
May King of Sweet Springs	32082	2	12259	50J + 50L	4.38	50M + 50P	595.1
May King's Vrangue of Ingleside	15430	15	13570	40I + 35J + 13K + 7L + 7M	5.06	7I + 20J + 13K + 33L + 13M + 13N	686.6
May Lad	R.G.A.S.						
	2217 P.S.	2	11098	50K + 50M	4.84	50K + 500	532.8
May Rose Excelsior	30694	2	10745	50K + 50N	4.98	56J + 500	535.1
Imp. May Rose King	8235	20	12824	20I + 65J + 20K + 10L + 10M	4.94	10I + 20J + 10K + 15L + 5M + 20N + 100 + 10P	633.5
May Rose King 2d	13130	10	11557	10I + 20J + 30K + 10L + 10M + 50N	5.33	40I + 36J + 10L + 10M + 10N	616.0
May Rose King 3d	13449	3	13540	67I + 33K	4.47	33I + 330 + 33P	605.2
May Rose King of Burnside	18601	4	10878	50K + 25M + 25N	4.90	25I + 25J + 25M + 25P	533.0
May Rose Prince	9245	4	10715	25I + 25J + 25N + 250	4.80	25I + 50N + 25P	514.3
May Rose Secret of Pencoyd	27844	2	12463	50I + 50N	4.75	50M + 50N	592.0
May Rose's Lord Mar	R.G.A.S.						
	3155 P.S.	2	11310	50K + 50L	4.91	50J + 50L	555.3
May Rose Squire of Medfield	17743	2	10602	50L + 50M	5.03	50K + 500	533.3
May Rose-Starlight	24843	4	11855	25I + 25J + 50N	4.89	25K + 50I + 250	580.2
Imp. McKerrow's Herald Governor	30404	2	12484	50I + 50L	4.79	50L + 50N	598.0

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
McQueen of Woodend	8889	6	9157	17L+17N+33O+33P	4.79	17J+17L+50N+17P	488.6
Menaska	9698	2	12958	50J+50K	4.85	50J+50N	584.8
Merion Square	10181	3	8548	33N+67P	5.01	33J+33K+33O	428.3
Imp. Merry Anton	8337	3	10267	33L+33M+33O	4.66	33I+67P	478.4
Merry Anton's Grandson	21563	3	13470	50J+50J	5.13	50K+50L	691.0
Merry Christmas	3659	2	9569	50M+50O	5.32	50J+50K	505.9
M. smatic	7529	4	11126	25J+25K+25M+25N	4.78	25J+25M+25O+25P	531.8
Milford Lassie 2d's Anchor	8467	3	10626	33L+67M	4.60	33M+67O	488.8
Milionaire	4955	6	8657	17M+17N+17O+50P	5.44	50J+17J+17K+17M	470.9
Milwood's Mr. Driver	7692	2	8279	50O+50P	5.21	50J+50K	431.3
Milwood's Young Dictator.	6298	3	9255	33M+33N+33P	4.36	33M+67P	403.5
Milroy	3499	2	10199	50L+50O	5.32	50I+50M	542.6
Minnette's Masher	R.G.A.S.	2	10654	50K+50O	4.68	50I+50P	470.5
Imp. Minnette's Sequel	1413 P.S.	2	12170	50J+50L	4.91	50I+50P	597.5
Mm)	1563H	2					
	R.G.A.S.						
	1415 P.S.						
Miron of Edgewater	39355	2	12482	50L+50M	4.67	50L+50P	582.9
Miss Fie's Lord Hardwick	1311	4	10447	25L+75M	5.02	25J+25L+50M	524.4
Miss Lucretia's Hambro	28230	7	11991	14I+14J+14K+43L+14N	4.78	14J+25M+29N+14O+14P	573.2
Miss Luetta's Standard	21691	2	11844	50I+50N	4.90	50I+50P	580.4
Miss Nancy's Prince	18299	2	10629	50L+50M	4.49	50M+50P	477.2
Missy's May Rose King of the Glen	19660	2	12945	50J+50K	4.87	50K+50N	586.6
Moderator	10764	2	17372	100I	5.06	50K+50L	879.0
		12	11155	8I+25J+33L+8M+8N+	4.80	8I+33L+17M+8N+25O+	
				8O+8P		8P	
Moderator	R.G.A.S.						
	1051 P.S.	2	10821	50J+50O	4.88	50K+50N	535.4
M. Earl of Haddon	28228	2	14432	50I+50I	4.56	50N+50O	638.3
Mora's Glenwood Boy	18015	2	13287	50I+50M	5.37	50I+50K	713.5
Moonlight King of Anna Dean							
Farrin	29586	4	11679	25I+50L+25M	4.84	25K+50M+25O	565.3
Mora of Genesee	13457	2	14851	50I+50J	5.02	50J+50N	744.5
Imp. Morven's Governor of							
l'Ebennerie	14324	2	10681	50M+50N	4.69	50M+50O	472.8
Morven's May Rose King	23301	4	11320	25I+25J+50N	4.54	50M+50P	513.9

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Imp. Moss Raider	22155	7	10880	144+29K+14L+11M+14N+14P	5.03	144+14J+14L+29M+29N	544.7
Mr. Viscount	6676	2	9308	50N+50O	4.94	50I+50M	459.8
Muriels, France of the Hougue	22085	2	12047	50I+50K	4.94	50K+50N	595.1
Imp. My First Hero	13806	2	11596	50I+50M	4.85	50I+50N	562.4
Myra's Jewel of Fairview	19158	3	11800	33I+33J+33O	4.72	33I+33O+33P	557.0
Myron of Mapleton	12408	3	12063	33I+33J+33K	5.09	67K+33L	656.8
My Star	R.G.A.S. 2333 T.S.	3					
Nadreno	20432	6	11266	17I+17K+33L+33M	4.82	17K+17I+33M+17N+17O	543.0
Nancy Mac's Son of Iowa Dairy	15088	3	15959	67I+33J	4.66	33I+33O+33P	763.6
Nancy Mac's Son of Norwood	10044	6	10500	17J+17K+17L+33N+17P	4.85	50I+33M+17O	569.3
Nancy's Boy of Maple Hill	31075	3	11011	17J+17K+33L+33N	4.99	17I+17K+50M+17O	549.4
Nansen	8235	3	9804	33J+33N+33P	4.94	33K+33I+33N	484.3
Nathan's Chap	4690	2	10494	67L+33O	4.78	33I+33M+33O	501.6
Imp. Natoma Blondello	12243	3	8569	50M+50P	5.36	100J	459.3
Natoma Cleo	12006	3	9307	67M+33P	4.88	33I+33L+33O	454.2
Imp. Natoma's Domingo	10603	2	12788	50I+50K	4.17	100P	533.3
Imp. Nellie's Sequel	14545	2	10627	50K+50O	4.75	50I+50P	504.8
Nelson II	R.A.A.S. 52 P.S.	2	11832	50I+50M	4.44	50M+50P	525.3
Nelson of the Cacheliere	R.A.A.S. 174 P.S.	9	9614	22K+11L+11M+11N+22O+22P	5.06	22I+22K+33L+22M	486.5
Nelson of the Simons	R.G.A.S. 10755 15245	9	10293	11I+22J+44M+22P	4.63	11I+22M+11N+25O+33P	476.6
Imp. Nelson of the Tailleuls	2371 P.S.	4	10069	25K+95M+25N+25P	4.84	95K+95W+50N	487.3
Ne Plus Ultra	15245	2	9588	50L+50P	4.94	50I+50P	471.2
Ne Plus Ultra 4th	20328	37	13228	38I+94J+22K+8L+3M+3N+3O	5.05	16I+14J+96K+11L+16M+14N+8O+3P	668.0
Nerio	6253	8	14243	63I+25K+13O	4.88	95K+95L+13M+25N+13O	695.1
Norverve King of Briarbank	27362	2	15315	1004	5.13	50K+50L	688.8
News Boy of Haddon	25912	2	8463	50I+50L	4.61	50N+50O	707.4
		3		33O+67P	4.55	33M+33O+33P	385.1

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Nielholby	R.G.A.S. 1900 P.S.	5	12048	401+40L+20M	4.68	30K+20M+30N+20O+20P	563.8
Noble Count	11684	4	9495	100N	5.25	.51+50K+25L	498.4
Noble of France	20429	5	11919	201+20J+20K+40M	4.39	201+40L+40N	594.8
Noble of New Place	R.G.A.S. 352 P.S.	8	10756	131+13J+13K+13M+13N +25O+13P	4.33	13J+25K+25L+13M+13N +13O	530.3
Imp. Noble of the Salines	17601	2	9698	100N	4.19	100P	406.3
Noblesse Oblige	11686	2	11210	56J+50N	4.67	100N	523.5
No Joke	R.G.A.S. 1404 P.S.	3	8382	67O+33P	5.51	67I+33K	461.8
Norfolk Squire	11565	13	10271	84+15K+23L+8M+8N +23O+15P	5.02	23I+8J+8K+23L+15N+ 23P	515.6
Northern Boy	R.G.A.S. 1779 P.S.	9	9881	11K+11L+44M+11N+22P	4.76	11J+22L+22M+11N+33O	470.3
Northern Boy II	R.G.A.S. 2534 P.S.	6	12200	171+17J+30K+17M	5.07	171+33K+17L+33N	618.5
Northesk	3073	2	11235	504+50N	4.52	50M+50P	508.9
Northwest	E.G.H.B. 14011	6	12040	171+17J+33K+17M+17N	4.97	171+33L+33M+17N	598.4
Norwood of Puncoyd	24275	5	10485	40K+40N+20O	5.43	80I+20O	569.3
Notable	15656	2	9180	50M+30P	5.59	50I+30M	513.2
Nubienne's Zac Taylor	4081	3	9784	33L+33N+33O	4.64	33M+33N+33P	454.0
Nugget of Dunn County	22209	3	9890	23M+67N	4.86	33K+33L+33O	480.7
Oatka Rex	13077	2	9042	50N+50O	4.84	50I+50M	437.6
O.K.	4446	4	10869	25K+25L+50M	5.10	25I+50K+25O	554.3
Okay	R.G.A.S. 2431 P.S.	4	10871	75K+25O	4.60	25K+25M+50P	500.1
Old Abe	10631	3	10808	33K+33M+33N	5.30	33L+33J+33O	572.8
Old Faithful	14947	9	13121	33I+33J+22K+11L	4.58	11L+22M+33N+11O+22P	600.9
Old Glory	11188	6	11584	171+17J+33L+33N	5.28	171+17J+50K+17M	611.4
Old Ironsides	25089	2	12021	56J+50I	4.32	50M+50P	543.3
Old King Cole	11293	6	11948	171+17J+33K+17L+17N	4.91	17K+50L+33N	586.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Imp. Old Paddy	16963	7	11102	111+14J+14K+14L+14M+29P	5.33	431+14K+14L+14M+14N	591.7
Offie's King of Belle Vernon	8041	9	10019	114+11K+33M+22N+11P	5.07	221+11J+11L+22M+11N+11O+11P	508.0
Offie's King of Belle Vernon 2d	11028	5	12213	601+20J+20K+20P	5.26	401+50K+40M	642.4
O'sen Lehigh	28134	4	9634	25M+50N+25O	4.69	251+25M+25N+25P	451.8
Onar	9924	2	9177	50N+50O	4.69	501+50P	490.4
Ondurman	5868	3	11740	654+33N	4.83	331+33M+33N	567.0
Imp. Onelda's Jewel	15650	8	9946	131+134+13M+13N+25O+25P	4.92	131+25K+25L+13M+25O	489.3
Onoko	8826	2	8355	50N+50P	4.79	50K+50O	400.2
Onoko of Maple Row	15222	10	9413	101+10J+10M+30O+40P	5.64	701+10J+10K+10L	539.9
Onondaga Boy	3942	4	8966	25N+75O	5.11	25J+25K+25L+25M	458.2
Onondaga's Ledyard	9655	4	10030	501+25N+25O	4.69	25J+50N+25O	470.4
Orange Duke of Edgemont	12289	2	12111	501+50K	5.26	50J+50K	637.0
Imp. Oriana's Pride of Edgewater	22034	2	12912	100J	4.54	100O	580.2
Osseo II	R. G. A. S.						
Imp. Osseo IV	1945 P. S.	6	11289	171+33K+17L+17N+17P	4.89	33J+17K+17N+33O	519.6
Ouida's King	28601	3	11303	331+33M+33O	4.89	331+67M	552.7
Overture of Prospect	9009	2	10142	501+50N	4.90	501+50M	407.0
Paddy of Briarbank	32821	2	8258	500+50P	4.62	50N+50O	386.1
Imp. Panama Lad	17138	3	9074	33M+33O+33P	5.18	331+33K+33M	470.0
	15383	11	9888	9J+18K+27M+9N+9O+27P	4.84	9J+18K+9L+18M+18N+27O	478.6
Pan of Rich Neck	34290	2	13219	501+50K	4.96	501+50O	655.7
Patient Prelate	15547	3	10020	33K+33L+33P	5.33	331+67K	531.1
Pat of Haddon	3919	3	11520	33J+33K+33M	4.37	33N+67P	503.4
Patrician	5663	4	10575	75J+25N	5.21	271+25K+25L+25M	551.0
Pauline's Governor	17565	3	11066	33J+33K+33P	5.44	671+33M	602.0
Paulson	8298	2	11476	50K+50L	4.83	501+50N	554.3
Pedro of Pinchill	7516	3	8536	67O+23P	4.92	33K+67M	420.0
Imp. Pedro of the Videcolas	10030	4	10505	50K+25J+25P	4.58	50K+50P	481.1
Percy's Golden May Secret	39626	2	13153	100J	5.00	50K+50L	669.5

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Pencoyd's Golden Secret	16550	9	11439	111+22J+11K+22L+11M+11N+11O	4.91	331+22M+22N+11O+11P	561.7
Penthoslia's Champion	18102	6	11188	50J+50N	5.15	171+33J+17L+33M	576.2
Penwyn	4290	3	10869	33J+33L+33O	4.97	33J+33L+33O	437.2
Penwyn 2d	7339	3	9112	20M+20N+40O+20P	4.75	40I+20M+20N+20P	432.8
Penwyn Munroe	8507	3	9942	33L+33N+33O	5.61	67I+33L	597.7
Penwyn of Maplehurst	8454	2	10333	50L+50N	4.56	50N+50O	471.2
Penwyn of Rosendale	11282	7	11096	114+14J+29L+14M+14N+14P	5.04	14I+43K+29M+14O	554.7
Pergue's May King	28869	2	13063	50I+50L	5.10	50I+50M	666.2
Percy B. of Chelsea	11851	2	9170	50N+50O	4.96	50J+50O	454.8
Perry Penwyn	11644	3	10063	33L+67N	5.15	33I+33K+33M	515.2
Peter Paul	4276	3	11749	33I+33J+33O	5.29	33I+33K+33L	621.5
Peter Paul's Anchor	9375	4	9130	50M+25O+25P	5.27	50J+50K	481.2
Phillip's O. K.	12892	2	11446	50K+50L	4.93	50K+50M	546.3
Phillipwood 4th	8630	3	11262	33J+33K+33O	5.00	67K+33N	563.1
Picotte of Hardwick	7384	7	9887	43L+14M+14N+14O+14P	5.08	43I+14K+14L+14M+14O	502.3
Pincrest May Prince	21427	7	10795	14I+14J+14L+14M+14N+14O+14P	4.66	29M+43N+29O	503.0
Imp. Pioneer of New Castle	12687	3	9518	33L+33N+33P	4.48	33N+33O+33P	426.4
Plato of Pinehurst	11418	3	11459	67J+33K	4.66	33K+33O+33P	535.9
Plymouth Anchor	16356	8	9565	25L+25M+25N+25P	4.93	13I+25J+25M+25O+13P	471.6
Pocomoke	6075	2	13237	100J	4.72	50K+50P	624.8
Polly's Farewell	R.G.A.S. 357 F.S.	2	12381	100J	5.06	50J+50N	626.5
Polly's Pride	R.G.A.S. 2974 P.S.	5	11635	20I+20M+20N+40O	5.20	60I+20N+20P	539.0
Pomara's Fernwood Boy	9621	2	11696	50J+50M	5.02	50K+50M	582.6
Preel VII's Champion	26132	10	7976	20N+10O+70P	5.14	20I+30J+30K+10M+10N+10O	410.0
Preeminent	11600	2	13063	100J	4.32	50J+50P	564.3
Imp. President of the Isle	14857	4	12691	50I+55K+25N	5.03	50K+25I+25M	638.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oettles	Average daughters' butter-fat per cent	Oettles	Average daughters' butter-fat (pounds)
Pretor	9316	13	10775	15J+38K+8L+15N+15O+8P	4.92	8I+15J+8K+23L+8M+15N+23O	530.1
Pretoria's King of Midlothian	22641	7	11817	29I+14J+11K+11L+14M+14P	5.26	29I+14J+43K+14L	623.2
Pretoria's Sheet Anchor of Florham	9848	2	8636	50M+50P	4.85	50K+50O	418.8
Pretor of Cayuga	12313	2	11630	56J+50L	5.25	56J+50L	611.6
Pride of Cicero	11475	2	8910	50N+50P	4.54	50M+50P	404.5
Imp. Pride of Day	17126	14	10762	7I+21K+36L+7M+7N+7O+14P	4.95	11I+11J+21K+21M+21O+7P	529.7
Pride of Koshkonong Place	10250	2	8375	50K+50L	5.01	50O+50P	419.6
Pride of the Priquet	R.G.A.S. 325 F.S. 18317	2	8547	50N+50P	4.92	50I+50M	420.5
Pride's May King of Linda Vista	15307	8	9701	13I+13M+38N+25O+13P	4.67	13I+50N+25O+13P	453.0
Primal	15307	2	10937	50I+50O	4.88	100M	533.7
Primal Hyacinth	25774	2	10130	50I+50O	4.83	50L+50N	489.3
Primate	3969	3	10339	35K+35L+33O	4.88	35J+35I+35P	517.2
Primate of Lindhurst	9773	2	10174	50I+50N	4.97	100L	505.6
Primate	4812	4	10362	25J+50N+25O	4.77	25K+25M+50O	494.3
Priurose's Billy	R.G.A.S. 2998 P.S. 37553	4	10859	50K+25M+25O	4.63	25I+50N+25P	502.8
Priurose's Raymond	R.A.A.S. 65 P.S. 7778	2	8599	100O	4.95	50I+50N	425.7
Prince Albany	17599	2	9685	50L+50P	5.11	50I+50K	524.0
Prince Alfred of Shirley	10476	2	9713	100N	4.68	50M+50O	456.0
Imp. Prince Billy of Rich Neck	10476	8	10272	50I+50P	4.99	50I+50O	512.6
Prince Edward of Lindenhurst	10476	2	10638	13I+13J+13L+25M+25O+13P	5.13	38I+13J+13L+13M+25N	533.4
Prince Euclid	17575	2	11901	50I+50M	5.09	50K+50L	605.9
Prince Frederick	22335	3	13689	35I+67J	4.36	23N+23O+33P	396.8
Prince Fresno of Jericho	16340	2	10273	50I+50N	5.18	50I+50M	352.1
Prince Harry of Briarbank	13347	2	8336	50O+50P	5.60	50I+50J	467.9
Prince Harry of Topsfield	8736	3	10178	33I+33M+33N	5.30	33I+35J+33L	539.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiltes	Average daughters' butter-fat per cent	Octiltes	Average daughters' butter-fat (pounds)
Prince Ired	7964	2	7988	100P	5.97	100I	476.9
Prince Ito	R.G.A.S. 1703 P.S.	2	12783	50I+50N	4.02	50L+50P	590.6
Prince Lawton	7696	4	10638	25K+50L+25O	5.04	25J+25K+25L+25O	586.2
Prince Ledyard Bay	14886	3	10896	33J+33M+33O	5.27	33I+37K	574.2
Imp. Prince Lelwelyn of the Isle	12648	2	10912	50L+50M	4.02	50N+50O	504.1
Prince Mac of Katonah	11030	2	9340	50N+50O	4.79	100M	447.4
Prince of Grotton	9841	28	9752	7J+4K+7L+25M+21N +18O+18P	4.86	4I+11J+18K+14L+14M+ 7N+13O+14P	473.9
Imp. Prince of la Croix	4050	4	13194	50I+25K+25M	5.18	25I+25J+50M	683.4
Prince of Litchfield	18868	3	11838	25I+50K+25N	4.81	25J+50N+25O	569.4
Prince of Manchester	11139	4	11394	33K+67L	4.93	33J+33M+33N	561.7
Prince of Nelsonville	11537	2	9693	50L+50O	4.51	50N+50P	437.2
Prince of Oaklawn	8503	2	9976	50K+50P	5.77	100I	575.6
Prince of Pinecliff	14536	3	11070	33I+33O+33P	5.27	33I+33J+33P	583.4
Prince of Quesnard	R.A.A.S. 72 F.S.	2	11477	50I+50O	4.47	50N+50P	513.0
Imp. Prince of Sarnia	22000	10	12207	20I+30J+10K+10L+10M +30N	4.34	10N+50O+40P	529.8
Prince of Stannox	19540	2	10766	50L+50M	4.92	50I+50O	529.7
Prince of the Vauquiedor	R.G.A.S. 1675 P.S.	2	9815	20I+30M+20N+40P	5.06	40I+30M+20N+20O	496.6
Prince of Zelenople	12026	5	11580	50I+50N	4.98	50J+50O	576.7
Prince Oscar of Anna Dean Farm	27282	3	11046	35K+35L+35M	4.92	67K+33P	543.5
Prince Paris	16726	2	9787	50I+50O	5.04	50K+50M	493.3
Prince Regent of Meadowbrook	13962	2	11394	25I+25K+25L+25P	4.95	25J+25L+25M+25O	589.5
Prince R. of Lawton	8643	4	11944	50J+50L	4.71	100N	562.6
Prince Rosendale's Grandson	9760	2	8419	50O+50P	5.59	50I+50J	470.6
Prince Royal of Spring Brook	13942	2	11584	50K+50L	4.71	50M+50O	545.6
Prince Rupert	R.A.A.S. 62 P.S.	9	8872	11L+11M+11N+11O+ 56P	5.00	11I+25J+22L+22M+11N +11O	443.6
Prince Select Alexandre	15556	2	10683	50K+50N	4.34	50O+50P	463.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Prince Select of Muster Hill	10278	2	9636	100N	4.63	50M+50O	446.1
Princessa Glenwood's May King of Ingleside	19646	2	11551	50K+50L	5.17	50J+50K	597.2
Princess Deasie's Son	28148	2	11379	50J+50M	5.63	50J+50K	640.6
Princess L. S. Norwood Boy	15969	4	11895	50J+25K+25N	4.55	50J+50P	541.2
Princess Select's King	26348	7	8245	10M+11N+14O+57P	5.42	20J+57J+14N	446.9
Princess Select's Son	11025	2	11571	100K	4.82	100M	557.7
Imp. Princess's Jewel	24877	29	10859	7I+7J+21K+14L+21M+14N+100+7P	4.77	7I+10J+7K+3L+24M+17N+3O+28P	518.0
Priscilla's May King	19200	3	6947	67J+33K	5.32	100P	369.6
Proddia's Island Champion	13422	3	10393	33L+33M+33N	4.48	33N+33O+33P	405.6
Proddia's Masher	16691	4	10574	25K+25L+25M+25N	4.51	25L+75P	476.9
Professor Hudson 2d	5222	2	9133	100O	4.48	50N+50P	469.2
Prospect	3439	2	8492	50N+50P	5.44	50J+50K	462.0
Province	20502	3	9921	33L+33M+33O	5.07	33K+67L	503.0
Imp. Queenie's Gay Lad Du Bray	17301	2	11577	50K+50L	4.59	50N+50O	531.4
Queen's Governor	24314	2	7000	100P	6.16	100I	431.2
Imp. Queen's Jewel of the Blicqs	44438	2	11556	50K+50L	4.80	50K+50O	551.7
Queen's Bloom's King Royal	16443	4	9801	25J+25N+25O+25P	4.80	25M+50M+25O	484.2
Radium	9193	9	9218	11K+22M+11N+33O+22P	4.94	44K+11L+22M+22N	457.2
Rajah of Linda Vista	26893	3	8766	33I+67P	5.15	33I+33L+33N	451.4
Ralph of Crest View	10777	4	10985	25K+50L+25N	4.46	25M+25O+50P	480.9
Imp. Rance's Sequel	10463	10	10708	16J+10K+30L+30M+10M+10O	4.47	10J+10L+20N+10O+50P	478.6
Ramona's Standard of Plattville	21858	2	10792	50J+50P	5.02	50J+50N	541.8
Rastus of Koshikonong Place	12201	2	8780	50N+50P	4.92	50J+50O	432.0
Imp. Ravenscroft Coronation	25173	3	8461	33N+67P	5.17	67J+33N	437.4
Raymond of Ashburton	18386	2	9647	50L+50O	5.47	50J+50M	527.7
Raymond of Blays Farm	R.A.A.S.						
Raymond of Carriere Viron	191 P.S.	5	10464	20J+20K+20M+20O+20P	4.72	20K+40M+20O+20P	493.9
Raymond of Homestead	R.A.A.S.						
	98 P.S.	4	9557	25J+50O+25P	5.13	100K	490.3
	18063	8	10262	13J+13K+13L+38N+25O	4.63	13K+13L+38N+38P	477.2

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Raymond of La Croix	R.G.A.S. 2692 P.S.	8	9765	13J+13L+13M+25N+13O +25P	5.12	13I+13J+25K+33L+13M	500.0
Imp. Raymond of La Houquette	17654	3	9332	67M+33P	5.19	33I+33K+33M	484.3
Imp. Raymond of le Tetre	16911	7	9206	14L+14M+14N+14O+ 43P	4.70	14L+14M+43N+14O+14P	432.7
Imp. Raymond of Sarnia	19172	2	9196	50J+50P	5.21	50J+50K	479.1
Raymond of the Jaonnets	R.G.A.S. 3525 P.S.	3	9716	33J+67P	5.20	33I+33J+33O	505.2
Imp. Raymond of the Preel	11533	16	9338	13K+6L+13M+25N+6O +38P	4.91	6I+13J+19K+13L+13M+ 13N+13O+13P	458.5
Imp. Raymond of the Preel II	13381	12	9944	17K+17L+25M+5N+17O +17P	4.81	17I+8J+8K+8L+8M+17O +33P	478.3
Imp. Raymond of the Preel IV	19235	16	10532	13I+6J+6K+19L+6M+ 13N+13O+25P	4.95	13I+13J+13K+25L+6M+ 13N+6O+13P	526.3
Imp. Raymond of the Preel V	13382	3	9937	33K+33M+33P	5.52	33I+33J+33K	548.5
Imp. Raymond of the Preel VI	14370	11	10297	18J+27L+18M+9N+9O +18P	4.60	9K+18L+18M+9N+9O+ 36P	472.3
Imp. Raymond of the Preel VII	14361	4	10473	50J+25M+25O	4.47	25M+25N+50P	468.1
Imp. Raymond of the Preel VIII	16746	4	10275	25J+50M+25P	4.81	25I+25L+25O+25P	494.2
Raymond of the Preel XIII	R.G.A.S. 2990 P.S.	4	10362	25J+25K+25O+25P	5.72	75J+25N	592.7
Raymond of the Rocque a Boeuf	R.G.A.S. 2968 P.S.	2	7392	100P	5.19	50J+50L	382.1
Raymond of the Spurs	R.G.A.S. 2408 P.S.	2	11902	50J+50M	4.89	50L+50M	582.0
Raymond's Cambrees Lad of Lewison	19611	2	10183	100M	5.38	50I+50L	547.8
Raymond V.L.'s Civilian of Lewison	17821	2	8474	50M+50P	5.43	50I+50J	460.1
Imp. Raymond's Daisy's Son	15216	4	10132	25K+25M+25N+25O	4.77	25K+25L+50O	483.3
Imp. Raymond's Emperor	15380	3	9063	67N+33O	5.11	33J+33L+33M	463.1
Imp. Raymond's Governor	22903	2	10914	50L+50M	5.10	50J+50L	556.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Imp. Raymond's Pearl King	24301	14	10649	14L+7J+14K+14M+21N +7O+21P	5.51	36J+43J+14K+7N	586.8
Raymond's Pioneer of Lewison	19163	9	11882	11J+67K+25L	4.85	11J+11K+11L+33M+11N +11O+11P	576.3
Imp. Raymond's Pourquoil Pas	17653	4	11033	50J+25N+25O	4.63	25J+25M+25O+25P	510.8
Imp. Raymond	12178	2	10781	50J+50M	4.39	50J+50O	538.0
Ray of Edgewater	17306	2	8710	50N+50P	5.18	50J+50L	451.2
Ray of Portland	10740	3	19833	33J+33N+33O	5.06	33J+33J+33P	551.2
Imp. Remus of the Isle	16916	2	8223	100P	5.20	50J+50L	427.6
Red Boy of Ledyard	13110	2	9039	50M+50P	5.23	50J+50N	472.7
Redina's Pride	13165	2	8651	50M+50P	5.33	50J+50L	477.1
Reformer	R.C.A.S. 2528 P.S.	3	11672	33J+33K+33N	4.76	33J+67N	555.6
Imp. Reframer of the Chene	22004	2	11833	100K	4.59	50M+50P	533.1
Reinhardt of Haddon	17345	5	11232	20J+30J+30M+40N	4.43	20K+30N+60P	497.6
Reputation of Platteville	10461	4	11926	50J+25M+25O	4.32	30K+25L+25O	586.8
Reputation of Portage	10635	10	13015	50J+10K+10L+10M+ 100+10P	4.37	10J+10J+20K+10L+30M +10N+10P	646.8
Reservation Pioneer	30121	2	12109	50J+50K	5.53	50J+50K	669.6
Reuben of Edgewater	31786	2	9967	50K+50P	4.56	50M+50P	454.5
Rex of Eastside	12763	2	8959	50M+50P	5.20	50J+50L	465.9
Rex of Rib Neck	31472	7	12568	11J+7J+14L	5.22	29J+14J+29K+14M+14N	671.7
Rheas's King of the May	14368	18	11179	11J+11J+11K+30L+6M +17N+5P	4.66	5J+11K+5L+11M+22N+ 17O+28P	520.9
Imp. Ribert's Golden Noble	16113	8	10371	13J+25K+13L+13M+ 13O+25P	5.17	25J+13J+13K+25L+13M +13N	536.2
Richmond Caudray	19459	2	11113	50J+50N	5.01	50J+50O	556.8
Richmond King	15600	2	8071	50N+50P	5.37	50J+50L	433.4
Richmond Signor	18652	6	10345	50J+17M+17N+17O	4.54	17M+17N+50O+17P	469.7
Richmond Standard	13661	3	16201	33J+33M+33O	4.68	33J+33O+33P	477.4
Ridgeview's Chesterbrook	5377	3	9837	33J+33M+33O	4.90	67L+33N	482.0

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocicles	Average daughters' butter-fat per cent	Ocicles	Average daughters' butter-fat (pounds)
Rinaldo	8917	10	12020	10L+30J+20K+20L+10M+10N	4.92	10L+30J+10K+20L+400	591.4
Rival of Edgemont	21749	2	9914	50M+50N	5.22	50J+50K	517.5
Roberta's Ledyard Bay	26531	2	6272	100P	5.82	100I	365.0
Robert Bloomingdale	6316	2	8585	50N+50P	4.94	50L+50M	424.1
Imp. Roberts' Boy	21662	8	10401	25N+13K+13L+13N+25O+13P	4.91	13J+13J+25L+38N+13P	510.8
Imp. Roberts' Boy of the Barras	22446	2	11693	50J+50O	4.67	100N	518.0
Imp. Roberts' Criterion of Belview	26887	9	11174	11I+22K+11L+22M+33N	4.98	11I+22J+33M+22N+11O	566.5
Imp. Roberts' Golden Noble	21673	6	8556	50O+17N+33P	5.25	17I+17J+17L+33K+17M	438.7
Robiana's Standard	7254	12	10510	8I+8J+8L+17M+17N+42O	4.90	8I+17J+8K+8L+25M+25O+8P	515.0
Robin of Richmond L.E.S.	14802	7	10355	29J+14M+14N+29O+14P	5.00	29I+14K+14M+29N+14O	517.9
Robinson's Glenwood Boy	15638	7	11388	43J+14L+14M+14N+14O	4.96	29J+14K+14L+29N+14O	564.8
Robina's Speculation	13819	4	10698	25K+25M+50N	4.81	25L+50M+25N	485.7
Roekingham	18120	7	10274	14I+29K+14M+29O+14P	5.31	29I+14J+29K+14L+14M	545.5
Roemont of Level Green	3759	2	11344	50K+50L	4.55	50I+50P	516.2
Roebuck	R.G.A.S.						
Rochampton May Rose Lad	1923 P.S.	2	12603	50I+50L	4.50	50N+50P	571.2
	R.G.A.S.						
Rochampton Polo 3d	2916 P.S.	2	12281	50J+50L	4.54	50L+50P	557.6
	E.G.H.B.						
Roland	2700	3	11376	33J+33L+33M	4.85	33J+33N+33O	551.7
	R.G.A.S.						
Roland of Seaview 11th	346 P.S.	3	10367	33K+33M+33O	4.89	33K+67M	506.9
	E.G.H.B.						
	1710	2	10319	50I+50N	4.92	50K+50N	507.7
	7715	2	7612	33O+67P	5.68	67I+33J	432.4
Rollicsom	11212	3	8655	67O+33P	4.95	33K+33L+33O	423.5
Imp. Roman Emperor	12803	3	12600	33I+33L+33M	4.93	33J+33K+33O	625.6
Imp. Romany's Choice	R.G.A.S.						
Romulus X	1280 P.S.	2	8949	50N+50O	4.85	50L+50N	434.0
	R.G.A.S.						
Romulus XIV	343 P.S.	3	11328	33K+67L	5.23	33J+67K	592.5

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Rosamond's Lad	8474	2	10251	50K+50O	5.12	50J+50L	523.8
Rosemont Billy of Spring City	21163	2	12559	106J	5.50	50I+50I	690.7
Ross-noble	20327	2	10811	50K+50N	5.20	50I+50N	502.2
Rose's Mashor	9810	2	11643	50J+50L	5.22	50J+50L	607.8
Rosette's Marshall	12236	4	8524	50O+50P	5.23	75J+25L	446.3
Rosie's Golden King of Oakhurst	31630	4	12619	25I+56J+25L	5.18	56J+25K+25L	653.7
Imp. Rouge's Chene	21632	2	12131	50J+50K	4.48	50M+50P	543.5
Imp. Rouge II's Son	18387	8	9186	13L+13M+50O+25P	4.88	13J+25L+38M+25O	448.3
Rowena's Main Stay	9782	2	10272	50L+50N	4.92	50K+50N	505.4
Royal Blood VI	R.G.A.S.						
Royal Blue	1261 P.S.	2	10884	50L+50M	4.60	50M+50P	500.7
Royal Bowe	23277	2	10154	50L+50N	5.37	50I+50M	545.3
Royal Bowe	1793 P.S.	2	8630	50N+50P	5.00	100L	431.0
Royal Combination of Westmoreland	24586	3	11737	33J+33K+33M	5.03	33I+33M+33N	590.4
Royal Duke of Waukesha	13168	3	8581	33N+33O+33P	5.50	67I+33K	494.1
Royal Duke's Standard	20141	4	12212	25J+50K+25L	4.68	25I+25M+25N+25P	571.5
Royal Favour	25090						
Royal Fern	F.G.H.L.B.	2	12056	100K	5.32	50I+50K	641.4
Royal Flush	3389	2	8589	50N+50P	5.41	50I+50K	464.7
Imp. Royal Golden Hero	9411	2	9503	50M+50O	4.64	50I+50P	440.9
Royal Golden Hero	16905	4	11562	56J+25K+25O	5.13	50I+25K+25P	593.1
Royal Golden Hero II.	R.G.A.S.						
Royal Governor of l'Etienneville	2763 P.S.	3	11645	33J+33K+33M	4.48	33N+67P	521.7
Royal Governor of l'Etienneville	1484 P.S.	9	10890	22I+11J+11M+22N+11O			
Imp. Royal Governor of the Gree	28602	6	11579	33J+17K+17L+17M+17N	5.20	22I+11J+22K+44L	566.3
Imp. Royal Governor of the Gree	11792	2	13223	30I+50K	5.07	17I+50I+17M+17N	587.1
Royal Guide	R.G.A.S.				4.92	50I+50M	650.6
Royal Guide	2475 P.S.	2	9629	100N			
Royaline Beauty Boy	9278	3	10483	33J+33N+33O	5.14	50I+50L	494.6
Royaline 2d's Boy	6141	2	11213	33J+67M	5.03	33I+33L+33O	527.3
Royaline's Chief	7350	3	10535	100M	5.11	33I+33J+33O	573.0
Royaline's Chief		2			4.44	50N+50P	468.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd number	No. of daughters	Average daughters' milk yield (pounds)	Ocilles	Average daughters' butter-fat per cent	Ocilles	Average daughters' butter-fat (pounds)
Royaline 21's Derilus	10922	2	10112	100M	4.57	50M+50P	462.1
Royal of Hildeshelm	11732	5	9037	40N+40O+20P	4.98	40K+20L+40M	450.0
Imp. Royal of La Lande	6223	2	8794	50N+50P	5.32	106J	467.8
Royal Reliance	8922	2	11388	30I+50P	4.46	50M+50P	507.9
Imp. Royal Rival	9572	3	12598	67I+33P	5.22	33I+33J+33N	657.6
Royal Rival of Hillside Farms	16966	2	10847	30K+50N	5.18	50J+50L	561.9
Royal Sequel	R. G. A. S. 2538 P. S.	3	13250	33I+33J+33M	4.99	50K+33M+33N	661.2
Royal Standard's Duke	4763	2	7878	100P	4.99	50K+50M	393.1
Roy of Norwood	8141	17	10466	6I+6J+18K+12L+18M +12N+18O+12P	4.81	24K+12L+24M+24N+6O +12P	503.4
Roy of Tarbell Farms	10627	2	12159	50I+50M	4.70	50L+50O	571.5
Ruddy Gold	11682	5	11104	20I+40I+20M+20P	4.98	20I+20J+50M+20N+20O	553.0
Rudene of Elmshade	8800	2	12150	50I+50O	4.92	50K+50N	597.8
Rutus II of la Grande Rue	R. G. A. S. 2457 P. S.	2	11192	50K+50M	5.15	50I+50M	576.4
Russell of Roughwood	18984	2	9853	50I+50O	4.59	50M+50P	452.3
Rutilant	8399	3	10819	33J+33K+33P	4.50	33L+33N+33P	486.9
Rutilia's Gold Basis	5625	13	10250	8I+8J+8K+15M+8N+ 23O+31P	5.32	40I+15K+8L+31M 67L+33N	545.3
Rutilia's May King of Linda Vista	17945	3	14378	33I+67J	4.90	9I+9K+18L+9M+18N+ 36O	704.5
Rutilia's Sheet Anchor	5701	11	10346	18J+9K+27M+9N+18O +6P	4.80		496.6
Rydale V.	R. G. A. S. 982 P. S.	2	9465	50M+50P	4.91	50I+50O	464.7
Safety of Haddon	7418	2	9103	50M+50P	4.60	50M+50O	418.7
Imp. Sailor Boy	28600	5	11296	40J+20L+20N+20O	5.02	40I+20K+20N+20O	505.6
Sailor King	R. G. A. S. 3364 P. S.	3	11985	33I+33J+33O	4.83	33I+33M+33N	578.9
Imp. Sailor Lad of the Fontaines	51060	5	12409	40I+40I+20N	4.83	40I+20M+20O+20P	590.4
Saint Patrick	R. G. A. S. 1847 P. S.	5	12410	40I+20K+40N	5.12	20I+40K+20L+20N	635.4
Salem's King	5362	2	10750	50L+50M	5.16	50I+50O	531.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Sandbur	4382	3	9381	33L+33N+33P	5.21	33I+33L+33N	488.8
Sandbur's Dory	16412	4	9047	50N+25O+25P	4.66	50L+25M+25P	421.6
San Toy of Pulias	2612 P.S.	5	11169	60K+20M+20N	5.05	20J+20K+40L+20N	564.0
San Ysidro	2:50 P.S.	2	10874	50J+50O	4.67	50M+50O	507.8
Satisfax	13228	5	10769	40J+20L+20N+20P	4.61	20J+20M+20O+40P	496.5
Scotch Whiskey	23713	2	10913	50K+50N	4.29	100P	468.2
Scottie of the Gacheres	R.G.A.S.	3	9245	67N+33O	4.91	33I+33N+33O	453.9
Selectrina's College Boy	4437	2	8829	50O+50P	5.43	50I+50J	463.1
Selma of Pinehurst 4th's Glenwood	25849	4	9286	25L+50O+25P	5.11	25I+25K+25L+25M	474.5
Selma of Pinehurst 3d's Main Stay	20692	4	11654	25I+25J+25M+25O	4.90	25I+25M+50O	571.0
Selma's Glenwood	12586	19	10122	11J+5K+11L+21M+21N+16O+16P	4.69	5I+16J+5L+16M+21N+5O+32P	474.7
Selma's Main Stay's Son	23585	9	9022	11K+11M+11N+44O+22P	4.87	11I+33K+11N+33O+11P	439.4
Selma's Stranford of Pinehurst	14157	3	11270	67K+33M	5.47	67I+33M	616.5
Senator Trowbridge	11351	6	10128	17I+17K+17N+17O+33P	4.89	17I+17L+33M+17N+17O	495.3
Sensitive's Sequel	25840	3	9190	33N+67O	5.03	33I+67N	462.3
Sequel of Keewaydin	15193	3	9880	33L+33M+33P	4.93	33I+33N+33P	487.1
Imp. Sequel of Sarmia	19171	2	12051	50I+50O	5.47	50I+50J	659.2
Sequel's Budget	R.G.A.S.	3	11798	67J+33O	4.80	67M+33N	566.3
Imp. Sequel's Budget II	21327	3	14499	67I+33J	4.97	33J+33M+33N	720.6
Imp. Sequel's Champion	16919	2	9528	50N+50O	4.43	50N+50P	422.1
Sequel's Cruseendo	R.G.A.S.	3	10433	25K+25L+25M+25O	4.68	25K+25N+50O	488.3
Sequel's Dairymaid's Glenwood	1406 P.S.	4	10433	25K+25L+25M+25O	4.29	50O+50P	473.7
Sequel's Delight	27312	2	11041	100L	4.99	40J+20K+20N+20O	684.9
Sequel's Delight	R.G.A.S.	5	12723	40I+20J+20M+20N	4.99	40J+20K+20N+20O	684.9
Sequel's Delight	2442 P.S.	5	12723	40I+20J+20M+20N	4.99	40J+20K+20N+20O	684.9
Sequel's Lad	R.G.A.S.	3	12305	33J+67K	4.37	33N+67P	537.7
Sequel's Lad	2248 P.S.	3	12305	33J+67K	4.37	33N+67P	537.7

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Sequel's Mascot	R. G. A. S. 3301 P. S.	2	12428	501+50N	4.65	100N	577.9
Sequel's Masher Boy of Maplewood	20391	2	9898	50M+50N	4.81	50L+50N	476.1
Imp. Sequel's Monogram	13649	25	11351	16I+12J+16K+4L+20M +12N+12O+SP	4.53	SK+4L+8M+24N+24O+ 32P	514.2
S. sequel's Qui Vive	R. G. A. S. 2920 P. S.	5	11506	201+40I+40M	5.17	201+20J+20K+20L+20M	594.9
Serpent	19802	4	9270	25M+25N+50O	5.24	50I+50K	485.7
Imp. Shamrock of the Doudit	16913	5	9756	20K+20L+40O+20P	5.25	20I+40J+20K+20N	512.2
Shamrock II of the Doudit	R. G. A. S. 2694 P. S.	5	9962	20J+20L+40O+20P	5.16	40I+20K+20M+20N	514.0
Shamrock of the Spurs	R. G. A. S. 1561 P. S.	2	10804	50J+50O	4.57	50M+50P	493.7
Sheet Anchor	2934	4	10071	25J+25M+25O+25P	4.84	50I+25M+25N	487.4
Sheet Anchor 2d	4149	2	9885	50M+50N	5.16	50I+50M	510.1
Shylock of Darlington	4579	2	8012	50N+50P	5.00	50I+50P	400.6
Signal Jewel	R. G. A. S. 2265 P. S.	4	11726	25I+25K+25L+25N	4.94	25J+25L+25M+25N	579.3
Silver Anchor	8791	2	9503	50I+50P	5.20	50J+50L	494.2
Imp. Silver King of the Isle	14363	7	11460	14I+14J+29K+29M+14P	5.31	29I+14J+14K+14N+29O	608.5
Sir Beaulieu of Lewison	12736	2	10110	100M	5.42	50I+50J	548.0
Sir Bonny	6084	3	10631	50I+50M	5.33	50I+50M	566.6
Sir Bonny Lad	8914	6	9578	17K+17M+33N+33P	4.67	17L+17M+17N+50O	447.3
Sir Corral	5239	8	10199	25L+50O+25P	4.86	25I+50O+25P	424.1
Sir Craftsman	7693	4	10977	13J+63I+25N	4.61	13I+13K+13L+38M+25P	533.5
Sir Fantine	4416	3	9512	33K+33N+33O	5.17	67I+33M+33P	491.8
Sir Ford	3440	3	10856	33K+33L+33N	4.76	33I+33M+33P	516.7
Sir Ford 3d	7363	3	13106	33I+33J+33L	5.03	33I+33M+33N	669.2
Sir Francis of Eau Claire	16274	3	8817	33M+67P	5.45	67I+33K	480.5
Sir Gaishad	6254	2	9130	50M+50P	4.86	50K+50O	443.7
Imp. Sir Harcourt of Chateau	18420	3	9701	33L+33N+33O	5.46	33I+33K+33L	529.7
Sir Henry	R. G. A. S. 2213 P. S.	9	11735	11I+11J+33K+33L+11M	5.21	22I+11J+22K+22L+22M	611.4

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oettles	Average daughters' butter-fat per cent	Oettles	Average daughters' butter-fat (pounds)
Sir Henry of Homestead	8782	2	1009S	50L+50O	4.00	50M+50O	464.5
Sir Marcus	R.G.A.S. 1816 P.S. 11082	6	9947 10062	17J+33K+50P 17K+17L+33M+17O+ 17P	5.37	33I+35J+33K	534.2
Sir Masher		6			4.88	17I+17J+17L+17N+33P	491.0
Sir Newlyn	R.G.A.S. 1264 P.S. 18559	2	7417	100P	5.72	50I+50K	424.3
Sir Onobono	5528	2	7141	100P	5.90	100I	421.3
Sir Primrose		2	9753	100N	4.94	50K+50N	481.8
S'r Raymond of la Hougue	R.G.A.S. 2826 P.S. 3713	2	10120	50M+50N	4.46	50M+50P	451.4
Sir Rob Roy	18615	2	7905	100P	5.68	100I	449.0
Sir Rosewood of Linda Vista		7	9304	14L+14M+14N+29O+			
Sir Snowdown	19252	9	10329	22I+11L+22M+33O+11P	4.86	14I+29K+14M+14N+29O	452.2
Sir Wm. Wallace	9513	2	8909	50N+50O	4.87	11I+11J+22L+11M+11N	503.0
Sister's King	33653	2	10852	50K+50M	5.42	50I+50L	482.9
Sister Sic's Yeoman	11820	3	10337	33K+33M+33O	4.84	33K+33M+33O	519.1
Skeezicks	9979	12	9920	42K+8L+8N+8O+33P	5.07	25I+17J+25L+8M+17O	500.3
Sly of the Bordages II	R.G.A.S. 1320 P.S. R.G.A.S.	2	10314	50L+50N	6.10	100I	502.9
Simlax of the Niaux	1385 P.S. 3951	2	10097	50K+50P	5.81	100I	629.2
Solomon F. 2d	20894	3	10965	33J+33L+33O	4.85	33K+33L+33O	586.6
Son of Masher's Sequel	16965	6	8113	17M+17N+67P	5.29	33I+17I+33K+17M	331.8
Sooky's Walter Sequel of Fritzlynn	8674	3	10117	33K+67O	4.40	33N+67I	429.2
Sororeraf	21925	2	7783	100P	5.59	30I+50K	445.1
Imp. Souvenir de l'Etienneerie		15	11091	7I+13I+30K+27L+7M		13I+13K+7L+20M+20N	435.1
				+7N+20O	4.83	+20O+7P	535.7
Splendide of Rieh Neck	16751	5	31958	40I+20K+20M+20N	5.56	60I+20J+20L	664.9
Spot of Meadowbrook	7552	3	10660	67L+33N	4.49	33M+33O+33P	478.6
Spot's Son of Upper Freehold	18852	3	10125	33J+33N+33P	5.01	67K+33N	507.3

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ostiles	Average daughters' butter-fat per cent	Ostiles	Average daughters' butter-fat (pounds)
Spotswood Billy Boy	9688	2	11638	50L+50P	5.00	50L+50O	551.9
Imp. Spotswood Clara's King	10055	2	10787	100L	5.35	50L+50K	577.1
Imp. Spotswood Golden Jewel	10823	5	10175	20L+20L+20N+40O	4.93	20L+20K+20M+40N	516.4
Imp. Spotswood King of the Lorier	9584	2	11955	50L+50N	4.76	50K+50O	569.1
Imp. Spotswood Masher Sequel	9687	17	11230	20L+20L+20M+40N	4.56	20L+20N+60P	512.1
Imp. Spotswood Sequel	9686	15	11445	12L+12L+41K+12L+24O	4.74	12L+18J+6K+6L+6M+12N+41P	542.5
Imp. Spotswood's Rival	8346	10	11400	20L+10J+10K+30M+10N+10O+10P	4.76	20L+10L+40N+20O+10P	542.6
Spread Eagle	20915	2	12481	50L+50L	4.94	50L+50O	616.7
Springer	2687	5	9722	50K+50P	4.94	50L+50M	480.3
Springunde	10473	5	10473	20L+20M+40N+20O	4.51	20L+40N+20O+20P	472.3
Squire Canterbury	10447	3	10667	33L+33L+33P	5.45	33L+67L	581.4
Imp. Squire des Blieqs	18415	2	12288	50L+50L	4.88	50K+50O	599.7
Squire Millwood	3689	2	10119	50L+50N	4.94	50L+50N	514.7
Squire of Beauheu	R.G.A.S. 1437 P.S.	4	11489	25L+25L+25M+25O	4.86	25L+25L+25N+25O	558.4
Imp. Squire of Biekleigh	15386	4	11921	25L+25K+50L	4.75	25L+25L+50P	566.2
Imp. Squire V. of Biekleigh	39133	5	11090	20L+20K+20L+40M	4.88	20L+20K+20L+20M+20P	541.2
Squire of Hickory Grove	25843	2	10130	50L+50N	4.97	100L	503.5
Squire of La Lande III	R.G.A.S. 1529 P.S.	2	11820	50L+50L	5.21	50L+50K	615.8
Squire of Primrose Farm	R.G.A.S. 1929 P.S.	4	11626	25L+25K+25L+25N	4.91	25K+25L+50N	570.8
Imp. Squire II of the Camp	15237	2	11290	50L+50M	4.51	50N+50O	509.2
Squire of the Couture	R.G.A.S. 2420 P.S.	2	8497	50O+50P	5.49	50L+50J	466.5
Squire of the Glen	18805	2	9572	50K+50P	5.35	50L+50K	512.1
Squire Vauxboletes	6659	4	9939	75M+25O	4.31	25N+75P	431.4
Squire Wecherill	5217	4	10274	25K+25L+25N+25P	4.88	25L+25K+25N+25O	501.4
Imp. St. Amant	11666	3	11167	33L+33K+33P	5.23	67L+35L	584.0
Standard	4652	2	13836	100L	5.23	50L+50L	723.6
Starlight	R.G.A.S. 1469 P.S.	2	8712	50N+50P	5.12	50L+50L	416.1

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Starlight's Excelsior	7922	20	10981	151 + 10J + 10K + 10L + 5M + 25N + 15O + 10P	4.82	51 + 5J + 15K + 5L + 25M + 5N + 30O + 10P	530.4 552.5
Star of Rome	766H	2	9676	100N	5.71	50I + 50J	594.4 464.7
Star of Saints	R.G.A.S. 2010 P.S.	4	11724	25I + 25J + 25K + 25L + 25N	5.07	25I + 25J + 25M + 25P	449.9 458.9
St. Austell Prince Charming	34670	4	9146	25I + 50N + 25P	4.92	25I + 50N + 25O	452.4
St. Austell Souvenir	28040	2	8927	50N + 50O	5.04	50J + 50M	536.1
St. Austell Square	27564	2	9214	50N + 50O	4.98	50K + 50M	504.8
Steinhurst King Masher	38475	3	9385	33M + 33N + 33P	4.82	33K + 33L + 33P	494.1
Stella's Deputy	6160	2	8161	100P	4.46	50N + 50P	504.8
Stirling Lad	17655	3	14054	67I + 33J	4.73	33L + 33N + 33O	446.0 536.5
St. John	R.G.A.S. 29653 P.S.	4	9330	50M + 25O + 25P	4.78	50K + 25O + 25P	549.8
Storm Anchor	10576	3	10238	33K + 33M + 33N	5.24	33J + 67K	585.0 593.9
Storm Anchor III	R.G.A.S. 2825 P.S.	3	10697	33I + 67O	5.14	67J + 33M	554.4 450.0
St. Paul	R.G.A.S. 2582 P.S.	3	10655	50I + 50M	5.49	50I + 50J	455.3
Imp. St. Paul II	18113	2	11161	33I + 33L + 33O	5.32	33I + 33K + 33L	
Stranford's Pinchurst	12951	2	11479	50J + 50N	4.83	50M + 50N	
Stranford's Devina's Hambro	29111	4	9193	25M + 50N + 25P	4.71	25K + 25M + 25N + 25P	
Stranford's Dacey	5566	2	9506	50I + 50J	5.21	50J + 50K	
Stranford's Glenwood of Pinchurst	13609	13	11110	15I + 15J + 15K + 8L + 23M + 15O + 8P	5.03	23I + 15K + 15L + 15M + 23N + 8O	573.9 403.9
Stranford's Glenwood of Pinchurst 3d	16202	6	7828	17O + 83P	5.16	17I + 17J + 33L + 33M	598.4
Stranford's Glenwood of Pinchurst 4th	16482	2	11020	50K + 50M	5.43	50I + 50L	
Stranford's Glenwood of Pinchurst 6th	16484	4	12300	25I + 25K + 50M	5.02	50K + 25L + 25M	617.5
Stranford's Glenwood of Pinchurst 7th	17392	4	12649	75J + 25K	4.37	50O + 50P	552.8
Strenuous	8216	2	7718	100P	4.86	50I + 50N	375.1

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Strong Anchor	5849	13	9945	8K+15L+31M+23N+8O+13P	4.89	8I+8J+23K+23L+8M+8N+8O+13P	486.3 445.2 520.0 598.6 564.7 583.8 461.8 502.7 455.8 479.0 485.4
Strong Anchor 2d	12836	2	8903	1000	5.00	50K+50M	486.3
Sue's King of Tarbell Farms	23087	2	10569	50K+50O	4.92	50I+50P	445.2
Suitana's Masher	17443	2	11710	50J+50M	4.77	50L+50O	520.0
Suitana's Sailor	17856	3	12145	33I+33K+33M	4.65	33M+33N+33P	598.6
Sultan Bicom	12228	2	10932	100L	5.34	50I+50M	564.7
Sultan of Burnside	8114	2	11047	60K+50M	4.18	100P	583.8
Sultan's Solitaire	9905	4	11147	25J+25K+25M+25N	4.51	25M+25N+50P	461.8
Sunburst's King Masher	37423	3	8394	33N+33O+33P	5.43	67I+33L	502.7
Sunderland's Traveler	25683	2	10020	100M	4.78	50I+50P	455.8
Sunnyside Royal K	5764	3	10008	33K+33N+33P	4.85	67K+33P	479.0
Surprise	R.G.A.S. 2054 P.S.	12	11005	8I+25J+8K+25L+17O+17P	5.43	58I+8J+17K+8N+8O	485.4
Susan's Echo	14163	3	9779	33M+33N+33O	4.95	33I+33M+33O	507.6
Suzerain 6th	2091	2	12466	50J+50L	4.91	50K+50N	484.1
Swan's Pride of Belmont	E.G.H.B. 20342	2	9998	50L+50O	4.95	100I	612.1
Imp. Sweet, Alice King's Son	8140	2	12971	50I+50L	4.91	50I+50O	494.9
Syph's Majestic	R.G.A.S. 3042 P.S.	2	12896	50I+50K	4.99	50K+50M	636.9
Imp. Syph's Sequel II	31081	2	12479	50I+50L	5.23	50Y+50L	643.5
Syvan of Maplehurst	3950	3	9575	33L+33O+33P	5.00	33I+33K+33O	652.7
Taycheedah Boy	10528	2	8949	50N+50P	4.90	100M	478.8
Taylor's Hero	R.G.A.S. 2499 P.S.	2	11649	50I+50O	4.74	50I+50O	438.5
Taylor's Nelson	R.G.A.S. 1775a P.S.	2	10685	25J+25L+25N+25P	4.74	50I+50O	552.2
Teddy of Woodend	8279	4	11832	100K	5.25	25I+25J+25L+25P	539.5
Teresita's Lonan	6286	2	9020	100O	4.50	50N+50P	582.4
Imp. The Conqueror II	15823	16	11626	19I+6I+19K+19L+6M+13N+13O+6P	5.52	100I	497.9
					4.77	19K+13L+13M+19N+3I0+6P	554.6

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book	No. of daugh.	Average daughters' (pounds)	Octiles	Average daughters' butter-fat per cent	Octiles	Average daughters' butter-fat (pounds)
Imp. The Conqueror III	198L5	11	9933	18L+9K+9M+18N+9O +36P	4.92	18L+9J+9K+18L+9O+18N +18P	488.7
The Conqueror V	R.G.A.S. 2407 P.S.	4	10691	25L+25L+25O+25P	4.74	25L+25M+25N+25P	506.8
The Country Gentleman of Edgewater	1389S	7	10255	14J+14L+29M+29N+14O	5.44	29J+43J+29K	557.9
Imp. The President	26519	4	12534	50J+50J+25N	4.75	50J+25N+25P	595.4
Toby of Portland	20950	2	12514	50J+50K	4.51	1000	564.4
T mahawk	15460	2	11715	50J+50M	5.48	50J+50K	642.0
Tomboy of Hilltown	9276	2	9443	50M+50O	4.73	50M+50O	446.7
Tommy Britton	5724	2	8643	50N+50P	4.90	100M	423.5
Tony of Maplehurst	14422	7	10638	14K+29L+43M+14N	5.53	57J+29J+14N	588.3
Tony of Prospect Hill	16212	2	10865	50L+50M	5.50	50L+50L	597.6
Toolo	7832	2	9150	50N+50O	5.00	50J+50O	457.5
Topsy's Count Yeksa	11759	2	11142	50L+50N	4.49	1000	500.3
Topsy's North Star	11470	2	10677	50L+50M	4.89	100M	532.1
Tostevin's Lad of Great Hill	27677	3	11540	67K+33L	5.31	67J+33J	635.0
Traveler 3d.	1644	3	8629	50N+50P	4.80	50J+50P	414.2
Trevor of Phehurst	12070	3	9182	67M+33P	5.39	33J+33J+33M	527.2
Trewiddien Favourite	2538 E.G.H.B.	2	9100	50N+50O	5.15	100K	468.7
Trawbice New Boy	2596 E.G.H.B.	2	12725	50L+50L	5.43	50L+50J	691.0
Treynore	3523	4	11039	25J+25K+25M+25N	4.94	25J+50M+25O	545.3
Tribrone Farmer	9827	2	9267	50N+50O	5.25	50J+50K	486.5
Tricksey's Sam	15289	2	12369	50L+50O	6.02	100L	744.6
Triple Champion	13667	18	10776	17L+5J+17K+11M+17N +11O+22P	5.09	17L+17J+17K+17L+17M +15N+11O	548.5
Triple Rose	19732	2	13623	50L+50J	4.90	50K+50N	667.5
Trislett's Derilus	9580	3	11426	33L+33L+33O	4.52	33M+33N+33P	510.5
Tristan's Douglas	4183	4	10640	50L+25M+25N	4.94	25J+50M+25N	525.6
Truero	28639 R.G.A.S. 1401 P.S.	2	14375	100L	4.70	50M+50O	673.6
		2	9682	50M+50O	6.25	100L	605.1

Table 5—Progeny Performance of Guernsey Sires—Continued.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Ocitles	Average daughters' butter-fat per cent	Ocitles	Average daughters' butter-fat (pounds)
Two Creeks	8648	8	10666		5.00		583.3
Ukiab	14344	13	8442	25J+25L+38N+13O 8K+SN+25O+62P	4.89	38J+13K+13M+25N+13O 8I+8J+23K+15L+15M+ 8N+23P	412.8 732.9
Ultra May King	27600	8	14370	50I+38J+13K 27N+9P	5.10	25I+38K+13M+13N+13O	547.1
Uncle Jim	16740	11	11097	9I+18J+18K+9L+9M+ 27N+9P	4.93	9I+27J+9M+45N+9O	641.7
Uncle Sam	11406	2	12860	50I+50O	4.99	50J+50N	412.9
Vallantcoeur	7749	13	7850	31O+69P	5.26	31I+31J+8K+8L+23M	604.8
Imp. Valentine's Squire	28093	2	11390	50K+50L	5.36	100J	540.4
Vale of Pencoyd	14713	3	13539	33I+33J+33L	4.91	67K+33O	600.9
Imp. Vazon's Sequel's Governor	20927	2	11376	50J+50N	4.75	50M+50O	611.5
Vega's Grandson	12210	2	12140	50J+50L	4.95	50K+50N	448.5
Veribest	9845	6	12109	17I+17J+17K+50L	5.05	17I+17J+17L+17M+17N +17O	492.6
Victorian	4135	3	8592	67O+33P	5.22	33J+67K	596.0
Victor of Lakeside	7739	2	11119	50I+50N	4.43	50O+50P	578.1
Victor of Pencoyd	18001	14	11016	7I+14J+7K+29L+21M +14N+7O	5.04	43I+29J+14K+7L+7M	434.0
Village Beau	9749	6	11471	17I+17K+17L+17M+33N	4.73	20K+20M+40N+20O	616.1
Imp. Villette Prince	9090	5	9176	20K+20N+20O+40P	4.96	50L+50M	458.4
Violet of the Bourg II's King	22923	2	12421	50I+50K	5.17	50J+50L	531.4
Violet's Duke	4222	2	8866	50N+50P	5.10	50I+50P	402.7
Violet's Pride of Iowa	20208	2	10420	50K+50O	4.65	50L+50P	522.4
Viscount	2177	2	8061	50O+50P	4.64	33M+33N+33O	530.7
Vivandier	R.G.A.S. 3290 P.S.	3	11258	67K+33L	5.23	25I+75L	469.6
Vivian of Hillstead	10182	4	10148	25I+25N+50P	4.87	50L+50O	385.6
Imp. Vranghe's Sequel of Lewison	12975	2	9642	50M+50O	4.36	33K+67P	445.3
Vulkan of Woodcrest	9229	3	8845	33M+33N+33P	5.03	33I+33N+33O	542.9
Waddington Sunrise	16815	3	8766	33N+33O+33P	4.47	33N+33O+33P	560.5
Weale	13194	5	12145	67J+33L	4.90	20I+20J+20K+20M+20P	640.0
Wedding Bells of Waukesha	16844	3	11012	40J+20L+20M+20O	4.90	33K+33M+33N	632.9
Imp. Westmoreland Squire	17018	3	13062	33I+33J+33L	5.22	50I+50M	605.4
Wide Awake's Choice	21665	2	12124	50I+50O	4.71	50L+50O	
	9274	2	12554	50I+50M			

Table 5—Progeny Performance of Guernsey Sires—Concluded.

Name of sire	Herd book number	No. of daughters	Average daughters' milk yield (pounds)	Oetiles	Average daughters' butter-fat per cent	Oetiles	Average daughters' butter-fat (pounds)
William B. of Maple Glen	21280	2	8581	500+50P	5.99	100I	514.0
Windflower 3d's Marshall	25286	3	12684	33I+33K+33M	4.72	67L+33P	598.7
Winner	8946	2	9107	50M+50P	5.14	56J+50L	468.1
Winner of the Meadows	9614	3	8006	33O+67P	5.03	33I+33K+33P	402.7
Woffram	5640	8	9258	13K+38M+13O+38P	5.08	38J+13K+25L+13M+13O	475.4
Wolf Rock	13082	2	9213	50M+50P	4.20	50O+50P	386.9
Wood Ford's Horace	13149	2	10481	50K+50O	5.19	50J+50L	544.0
Yeksa's Prince	1943	2	11642	50I+50K	5.30	50I+50L	617.0
Yeksa's Prince of Sunnyside	24334	2	13211	25K+50M+25O	5.25	50I+50N	693.6
Yeksa's Tops of Gold's Boy	35280	4	10449	50I+50K	5.15	25I+25J+25M+25N	538.1
Yeksa's Unique	13123	2	12692	50I+50K	6.06	100I	787.3
Yekstang, Jr.	13120	2	18080	33O+67P	5.15	67J+33N	416.6
Imp. Yenadizze	13204	2	13315	100J	5.33	50J+50K	720.3
Yenadizze II	R. G. A. S. 1990 P. S. 8618	2	8440	50M+50P	5.81	100I	490.4
Imp. Yeoman		4	12333	25I+50K+25N	4.79	75M+25N	590.8
Yeoman's King of the May	17053	8	12913	38I+13J+13K+13M+13N +13O	4.59	13K+25M+25O+38P	592.7
Yeoman's King Victor	22265	44	11536	16I+11J+20K+16L+14M +14N+7O+2P	4.97	11I+14J+18K+9L+14M +11N+20O+2P	573.3
		11	11888	18I+27J+18K+18L+ 18M	4.67	9I+9L+18M+18N+27O+ 18P	555.2
Yorick	8621	2	9411	50N+50O	5.29	50I+50K	497.8
Imp. Young Hero	12181	2	13652	50I+25J+25K	4.79	25I+25M+25N+25P	653.9
Young Increase	18062	2	8462	50N+50P	5.18	50J+50L	438.3
Zac Marshall	9908	4	8920	25M+50O+25P	5.04	50I+25L+25O	440.6
Zeta's Caster	13838	2	9126	50L+50P	5.44	50I+50J	496.5

Table 5 shows the progeny performance on a mature form basis of all sires having two or more daughters with 365-day records in the Advanced Registry. The multiplicity of uses to which this table may be put are obvious to all breeders of dairy cattle. There are one or two facts, however, which will help in interpreting the records as presented. Thus it is interesting to know the average progeny milk yield above which would be included the 10 per cent of sires having the highest average producing daughters. Similar facts would be of interest for the butter-fat percentage and the butter-fat. The milk yields, butter-fat percentages, or butter-fats which include each 10 per cent of the sires are given below.

Sires whose progeny's average milk yields are the leading 10% of the Advanced Registry have their average milk yields above	} 12833 pounds of milk at mature form
Sires whose progeny's average milk yields are the second 10% of the Advanced Registry have their average milk yields between	} 12047 and 12833 pounds of milk at mature form
Sires whose progeny's average milk yields are the third 10% of the Advanced Registry have their average milk yields between	} 11520 and 12047 pounds of milk at mature form
Sires whose progeny's average milk yields are the fourth 10% of the Advanced Registry have their average milk yields between	} 11097 and 11520 pounds of milk at mature form
Sires whose progeny's average milk yields are the fifth 10% of the Advanced Registry have their average milk yields between	} 10716 and 11097 pounds of milk at mature form
Sires whose progeny's average milk yields are the sixth 10% of the Advanced Registry have their average milk yields between	} 10293 and 10716 pounds of milk at mature form
Sires whose progeny's average milk yields are the seventh 10% of the Advanced Registry have their average milk yields between	} 9887 and 10293 pounds of milk at mature form
Sires whose progeny's average milk yields are the eighth 10% of the Advanced Registry have their average milk yields between	} 9446 and 9887 pounds of milk at mature form
Sires whose progeny's average milk yields are the ninth 10% of the Advanced Registry have their average milk yields between	} 8848 and 9446 pounds of milk at mature form

Sires whose progeny's average milk yields are the tenth 10% of the Advanced Registry have their average milk yields below	} 8848 pounds of milk at mature form
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Sires whose progeny's average butter-fat percentages are the leading 10% of the Advanced Registry have their butter-fat percentages above	} 5.41 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the second 10% of the Advanced Registry have their average butter-fat percentages between	} 5.22 and 5.41 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the third 10% of the Advanced Registry have their average butter-fat percentages between	} 5.10 and 5.22 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the fourth 10% of the Advanced Registry have their average butter-fat percentages between	} 5.01 and 5.10 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the fifth 10% of the Advanced Registry have their average butter-fat percentages between	} 4.92 and 5.01 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the sixth 10% of the Advanced Registry have their average butter-fat percentages between	} 4.86 and 4.92 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the seventh 10% of the Advanced Registry have their average butter-fat percentages between	} 4.77 and 4.86 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the eighth 10% of the Advanced Registry have their average butter-fat percentages between	} 4.67 and 4.77 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the ninth 10% of the Advanced Registry have their average butter-fat percentages between	} 4.54 and 4.67 per cent of butter-fat at mature form
Sires whose progeny's average butter-fat percentages are the tenth 10% of the Advanced Registry have their average butter-fat percentages below	} 4.54 per cent of butter-fat at mature form
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Sires whose progeny's average butter-fats are the leading 10% of the Advanced Registry have their butter-fats above	} 634.1 pounds of butter-fat at mature form

Sires whose progeny's average butter-fats are the second 10% of the Advanced Registry have their average butter-fats between	} 592.7 and 634.1 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the third 10% of the Advanced Registry have their average butter-fats between	} 565.6 and 592.7 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the fourth 10% of the Advanced Registry have their average butter-fats between	} 545.2 and 565.6 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the fifth 10% of the Advanced Registry have their average butter-fats between	} 527.9 and 545.2 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the sixth 10% of the Advanced Registry have their average butter-fats between	} 507.5 and 527.9 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the seventh 10% of the Advanced Registry have their average butter-fats between	} 487.7 and 507.5 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the eighth 10% of the Advanced Registry have their average butter-fats between	} 466.6 and 487.7 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the ninth 10% of the Advanced Registry have their average butter-fats between	} 438.6 and 466.6 } pounds of butter-fat at mature form
Sires whose progeny's average butter-fats are the tenth 10% of the Advanced Registry have their average butter-fats below	} 438.6 pounds of } butter-fat at } mature form

From Table 5 and the information just given it is possible for us to determine within which group any given sire may fall in relation to the rest of the Advanced Registry. Thus, from table 5, Alderney 2d's fourteen daughters have an average progeny performance of 12771 pounds. From the information just given above it is observed that an average progeny performance of 12771 pounds is in the second 10 per cent of sires, as this production lays between 12047 pounds and 12833 pounds of milk. In other words, this sire is in the highest 20 per cent of the breed. The average butter-fat percentage of the daughters of Alderney 2'd is 4.79 per cent. From the above data on butter-fat percentages it is seen that this average progeny performance is in the 7th group of sires, as the butter-fat percentage falls between

4.72 and 4.86 per cent. The average butter-fat of Alderney 2d's daughters is 611.7 pounds or this sire is in the second group, as his daughters' butter-fat was between 592.7 and 634.1 pounds. In like manner from the data just presented, the breeder may derive a rather accurate record of the productivity of any sire's daughters and the relative position of these daughters within the breed as compared with each other or compared for their sires.

PROGENY PERFORMANCE OF GUERNSEY SIRES SIGNIFICANTLY ABOVE THE AVERAGE IN MILK YIELD.

Table 4 gives the probable errors for the progeny performance of the different sires. It is of interest to study table 5 in the light of these probable errors, especially to select from table 5 the sires whose progeny performance is significantly high compared with the average of the rest of the breed. In a problem of this kind a difference is considered significant if it is three times the probable error. In other words if the average progeny performance of the given sire is three times its probable error (found in table 4) more than the breed's average, it may be considered as significantly higher than the average of the breed.

The method by which the significance of the sire's progeny performance is made may be illustrated as follows. The average milk yield of the Guernsey breed is 10942 pounds in mature form. King Masher of Chilmark has a progeny performance of 15477 pounds for his two daughters. The probable error of a record based on two daughters is found in table 4 to be 1107 pounds. To be significantly different from the average of the breed, 10942 pounds, the record of King Masher of Chilmark progeny performance should be 1107 pounds times 3 or 3,321 pounds more than the average of the breed 10942 pounds or the progeny performance of this sire should be at least 14263 pounds. Thus King Masher of Chilmark has a significantly high progeny performance for milk yield when compared with the rest of the breed. In a similar way, the significance of the other sires' progeny performance may be compared with that of the breed's average. When this comparison is made the sires shown in table 6 are found to have significantly high progeny performance tests for milk yield. In other words, it is a reasonable assumption that these sires should do better than those whose progeny performance test is that of the average of the breed.

TABLE 6.

Progeny of Guernsey sires with significantly high milk yield.

Name	H. B. No.	No. of Daugh- ters	Average Milk Yield	Ociles
Beacon Light B.	9417	2	17761	100I
Missy's May Rose King of the Glen	19660	2	17372	100I
Iagoo II.	{R.G.A.S. 2167 P.S.	3	16717	100I
Langwater Warrior	26509	5	16395	80I+20J
King Masher of Chilmark	27643	2	15477	100I
King of Birchwood	27366	2	15465	100I
Newgrove King of Briarbank	27362	2	15345	50I+50L
Mambrino	10085	3	15338	100I
Glenwood Bishop	9186	4	15320	100I
Dumont's Hero	18862	2	15189	50I+50L
Nadieno	20432	3	15099	67I+33J
Langwater Monarch	20899	4	14942	100I
Mora of Genesee	13457	2	14831	50I+50J
Langwater Hayes Rosie's King of the May	16723	16	14792	63I+19J+6K+13M
Marshall of Waddington	14320	2	14783	50I+50K
Langwater Holliston	28055	5	14746	60I+40J
Imp. Hayes Prince of Spotswood	8129	2	14689	100I
Gold Lassie's Julian	27764	9	14665	67I+11J+22K
Masher's Sequel 3d	13031	3	14600	67I+33J
Harbor Hill's Linden Masher	27831	2	14546	100I
Imp. Sequel's Budget II	21327	3	14499	67I+33J
Dairymaid's Nonpareil of Iowa	26763	2	14486	50I+50L
Dairymaid's Glenwood of Pine- hurst 8th	30900	2	14469	100I
King Masher	11084	11	14460	64I+18J+9K+9L
Mogul of Haddon	28228	2	14432	50I+50J
Jardiniere's Masher	20957	11	14391	55I+36J+9M
Rutlia's May King of Linda Vista	17945	3	14378	33I+67J
Tristan's Douglas	28959	2	14375	100I
Ultra May King	27600	8	14370	50I+38J+13K
Lennard 2d	{2162 {E.G.H.B.	2	14344	50I+50J
King of Chilmark	20798	10	14317	70I+10J+20M
Imp. Holden IV	12179	7	14275	57I+14J+14K+14M
Imp. King of the May	9001	29	14253	58I+17J+7K+7L+ 7M+3O
No Plus Ultra 4th	29328	8	14243	63I+25K+13O
Eminent of Sarnia	32962	4	14091	75I+25J
Sterling Lad	17655	3	14054	67I+33J
Bob Rilma's Monogram	29095	3	13960	67I+33J
John Q. of Edgewater	20967	6	13956	50I+33J+17L
Langwater Pencoyd	21830	15	13952	53I+27J+7K+7L+7M
Bell-founder	11681	16	13801	44I+19J+25K+6M+6N
Don of the Grove	21166	3	13763	33I+33J+33K
Jethro Bass	11366	22	13716	55I+23J+14L+4N+4P
Gold Thistle	8676	4	13704	75I+25N
Prince Frederick	22355	3	13689	33I+67J
Don Diavolo of Linda Vista	23565	3	13679	33I+33J+33K
Imp. Young Hero	12181	4	13652	50I+25J+25K
Anna Dean Prince	25752	4	13645	50I+25J+25L
Langwater Stars and Stripes	21872	9	13595	22I+44J+33K
May King's Vrangue of Ingleside	15430	15	13570	40I+33J+13K+7L+7M
Julian of Koshkonong Place	14400	10	13441	50I+20J+10K+20N
Imp. Hayes Royal 3d	22237	4	13380	50I+25J+25P
Ithen Daisy's May King of Langwater	17349	13	13330	46I+23J+15K+8L+8M
Langwater Royal Master	23663	4	13302	25I+50J+25K
Guydette	3966	5	13281	40I+40J+20L
No Plus Ultra	15265	37	13228	33I+24J+22K+8L+ 3M+3N+3O
Langwater Royal	14253	20	13185	30I+25J+15K+10L+ 15M+5P

Progeny of Guernsey sires with significantly high milk yield—Concluded.

Name	H. B. No.	No. of Daughters	Average Milk Yield	Ociles
Imp. Golden Secret of Lilyvale	10028	22	13179	40I+13J+13K+4L+ 13M+9N+4P
Dairymaid's Criterion of Iowa	28187	5	13122	40I+20J+40L
Old Faithful	14947	9	13121	33I+33J+22K+11L
G'oriana's King Masher	27645	5	13109	40I+20J+40K
Imp. Jip's Raymond of Waddington	14374	7	13102	29I+29J+29K+14M
Imp. Masher's Galore	8572	20	13087	35I+20J+10K+5L+ 20M+10O
Golden Masher	10464	5	13044	40I+60K
Jewel's Independence	10324	10	13024	50I+10K+20L+10M +10P
Irene's King of the May	18816	6	13018	33I+17J+33L+17M
Reputation of Portage	10695	10	13015	50I+10K+10L+10M+ 10O+10P
Langwater Golden Secret	26510	8	12966	25I+13J+38K+13L +13M
King Bell	13482	10	12954	50I+10J+10K+10L+ 10M+10N
Imp. Yeoman	8618	8	12913	38I+13J+13K+13M+ 13N+13O
Lavanton	11611	10	12898	30I+20J+20K+30L
King Francis	13500	8	12891	38I+33J+13K+13N
Rex of Rich Neck	31472	7	12868	14I+7J+14L
Imp. May Rose King	8336	20	12824	20I+40J+20K+10L +10M
Imp. Hayes Cherub 2d	25147	10	12819	30I+30J+10K+20L +10M
Alderney II	(R.G.A.S. 2215 P.S.)	14	12771	29I+36J+7K+14L+ 7N+7P
Imp. Lord Kitchener	11369	7	12732	29I+14J+29K+14M +14O
Langwater Cavalier	21012	10	12717	40I+20J+10K+10L +10N+10P
Imp. Flora's Sequel of Vimiera	25905	14	12662	29I+36J+7K+7L+ 7N+14O
Imp. Border Raider	22243	14	12590	36I+29J+7K+21L+7P
Marshall of France	9051	10	12570	20I+10J+40K+30M
Jethro's May King of Linda Vista	14591	10	12475	30I+30J+10K+10L+ 10N+10O
Langwater May King	13001	19	12461	26I+21J+32K+5L+ 5N+5O+5P
Langwater Hambro	21011	21	12345	19I+24J+14K+19L+ 19M+5O
Imp. Clara's Sequel	29414	33	12337	30I+12J+21K+15L +6M+12N+3P
Imp. Governor I. of the Chene	10563	21	12217	24I+24J+5K+10L+ 5M+14N+19O
Golden Noble II.	(R.G.A.S. 1836 P.S.)	28	11946	32I+7J+14K+11L+ 14M+14N+7P
Imp. Cora's Governor of Chilmark	8971	40	11586	20I+15J+20K+15L+ 10M+5N+5O+8P
Yeoman's King of the May	17053	44	11536	16I+11J+20K+16L+ 14M+14N+7O+2P

Table 7 gives similar data for the progeny performance of Guernsey sires having significantly high butter-fat percentages for their daughters. These sires are arranged in order of the average butter-fat percentage of the daughters. The sire's name, herd book number, number of daughters, average butter-fat percentage, and average percentage of daughters in each of the eight divisions of butter-fat percentage, are given in the table. It is found, for example, from these data that Truro has two daughters whose average butter-fat percentage is 6.25 on a mature form basis. Both daughters are in the highest class of butter-fat testers. Truro's daughters are significantly high in their butter-fat test.

The manner in which this table is formed is similar to that used for the formation of the table for milk yield. Thus the average butter-fat test on a mature form basis was found to be 4.94 per cent. The probable errors of records for any sire are given in table 4. Thus in the case of Truro, a sire with two daughters, the probable error of his record is .224 per cent. This sire would be expected to be significantly above the rest of the breed if his progeny performance record was more than the average of the breed plus 3 times the probable error or 4.94 plus 3 times .224 or a butter-fat percentage of 5.61. As Truro's daughters' average butter-fat percentage was 6.25, it may be concluded that Truro on the basis of his progeny performance is significantly higher than the average of the breed.

TABLE 7.

Progeny Guernsey sires—significantly high butter-fat percentage.

Name	Herd book Number	No. of Daughters	Average B.F.%	Ociles
Truro	{R.G.A.S. 11401 P.S.	2	6.25	100I
Infrangible of Oak Ridge	25037	2	6.17	100I
Queens' Governor	24314	2	6.16	100I
Forham of the Elms	14697	3	6.12	100I
S'y of the Bordages	{R.G.A.S. 11330 P.S.	2	6.10	100I
Yeksa's Tops of Gold's Boy	35280	2	6.08	100I
Cl'ovbane	9351	2	6.06	100I
Tricksey's Sam	15289	2	6.02	100I
William B. of Maple Glen	21280	2	5.99	100I
Prince Ired	7964	2	5.97	150I
Link	12261	2	5.91	50I+50J
Sir Omobono	18559	2	5.90	100I
Brittleware Roland	{1997 P.S. Fl. R.	2	5.83	50I+50K
Roberta's Ledyard Bay	26531	2	5.82	100I
Smilax of the Niaux	{R.G.A.S. 11385 P.S.	2	5.81	100I
Argo of Washtland	10452	2	5.81	100I
Imp. Yemadizze	12064	2	5.81	100I
Liberty Bluffer	20920	2	5.81	100I
Buller of the Sages	{R.G.A.S. 11992 P.S.	2	5.81	100I
Prince of Oaklawn	8503	2	5.77	100I
Josephine's Elmhurst's Gold Heir	11780	3	5.76	67I+33L
May King of Maplehurst	16050	2	5.75	50I+50J
Bijou Lad of Halycon	17553	2	5.75	100I
Raymond of the Preel XII	{R.G.A.S. 2990 P.S.	4	5.72	75I+25N
Sir Newlyn	{R.G.A.S. 1264 P.S.	2	5.72	50I+50K
S'ar of Rome	7604	2	5.71	50I+50J
Hailey Field	17171	6	5.71	50I+17J+33L
Lily's King of Maplehurst	12040	2	5.71	100I
Male'om of Monmouth	10814	2	5.68	50I+50J
Golden Bo Peep	14103	2	5.68	100I
Sir Rob Roy	3713	2	5.68	100I
Rollicksorn	7715	3	5.68	67I+33J
Bishop of Hildesheim	12091	5	5.67	60I+20J+20L
Golden Hair Apparent	12611	2	5.65	50I+50K
Le roi Lenfeste	7751	2	5.65	100I
King of the West	6520	2	5.64	50I+50J
Omoko of Maple Row	11522	10	5.64	70I+10J+10K+10L
Hermes of Midvale	30655	2	5.64	100I
Princess Deasie's Son	28148	2	5.63	50I+50J
Ithen Wrangler	{E.G.H.B. 1757	3	5.63	67I+33J
Glenwood's Washington of Maple Glen	17902	2	5.63	50I+50J
Duke of the Rochers	{R.G.A.S. 194a P.S.	2	5.62	100I
Duke of Broadview	3111	2	5.62	50I+50K
Penwyn Marroe	8307	3	5.61	67I+33L
Gold Dust's May King	24740	2	5.61	50I+50J
Jack III of New Place	{R.G.A.S. 1360 P.S.	4	5.59	50I+25J+25K
Imp. Atlanta Governor	24823	4	5.58	25J+25K+50I
Jettlo	18984	5	5.58	60I+40J
Knight of Gold	10836	3	5.57	33I+33J+33K
Splendide of Rich Neck	16751	5	5.56	60I+20J+20L
Ithen May King of Stannox	34377	4	5.56	50I+50J
Laugwater Cavalier	21012	10	5.54	50I+30J+10M+10O

Progeny Guernsey sires—significantly high butter-fat percentage—Continued.

Name	Herd book Number	No. of Daughters	Average B.F.%	Offiles
Deanie's Rose King	17773	5	5.54	60I+20M+20N
Dora's Boy of Sunny Valley	24470	3	5.53	67I+33N
Tony of Maplehurst	14422	7	5.53	57I+29J+14N
Imp. Raymond of the Preel V	13382	3	5.52	33I+33J+33K
Masher Sequel Mapleton	18437	3	5.52	67I+33K
Tostevin's Lad of Great Hill	27677	3	5.51	67I+33J
No Joke	(R.G.A.S. + 1404 P.S.)	3	5.51	67I+33K
Imp. Raymond's Pearl King	24301	14	5.51	36I+43J+14K+7N
King Edward of Fairview	8204	5	5.51	60I+20J+20M
Bonnie Fantins's Glenwood	14601	3	5.50	33I+33J+33K
Royal Duke of Waukesha	13168	3	5.50	67I+33K
George Washington of Maple Farm	20363	6	5.49	50I+33J+17L
Homestead's Golden Duke	6906	3	5.49	67I+33K
Magnet's Sequel of Keewaydin	22385	5	5.47	40I+20K+20L+20N
Golden Glenwood	10635	7	5.47	43I+43J+14M
Imp. Hayes Oliver	25149	4	5.46	25I+50J+25K
Charmante's Rose King	11746	8	5.45	38I+38J+13K+13L
May King of Maudesleigh	16744	4	5.45	50I+50J
Lady's Increase of Breese Hill	27735	7	5.45	57I+14J+14L+14M
The Country Gentleman of Edgewater	13808	7	5.44	29I+43J+29K
Hope's May Rose of Maple Hill	35903	4	5.44	75I+25L
Millionaire	4955	6	5.44	50I+17J+17K+17M
King of Chilmark	20798	10	5.43	50I+20J+20K+10M
King Bell	13482	10	5.43	40I+30J+20K+10M
Surprise	(R.G.A.S. + 2054 P.S.)	12	5.43	58I+8J+17K+8N+8O
Norwood of Pencoyd	24275	5	5.43	80I+20O
Halley	17344	4	5.42	50I+50J
Princess of the Blicqs's King	20548	7	5.42	29I+57J+14N
Dolly Dimple's May King of Langwater	12997	7	5.41	29I+43J+14K+14L
Victor of Pencoyd	18901	14	5.41	43I+29J+14K+7L+7M
Daisy Mahy's King	22148	5	5.39	40I+20J+40K
Glorious 2d	14053	7	5.39	37I+14J+14K+14O
Lavanton	11611	10	5.37	50I+10J+30L+10M
Sir Marcus	(R.G.A.S. + 1816 P.S.)	6	5.37	33I+33J+33K
Guydette Jr.	11405	9	5.35	44I+11J+22K+11L +11M
Jewel's Royal Combination of Wawa	15655	9	5.35	33I+11J+22K+22L +11N
Langwater Strongheart	10308	6	5.35	33I+50J+17M
Imp. Hero of the Court au Preel	13840	9	5.35	44I+11J+22K+ 11L+11M
Governor of Carteret	(R.G.A.S. + 3421 P.S.)	6	5.35	33I+17K+50M
Lord Waukesha	10148	18	5.34	33I+39J+11K+6M +11N
May Rose King 2d	13130	10	5.33	40I+30J+10L+10M +10N
Imp. Old Paddy	16903	7	5.33	43I+14K+14L+14M +14N
Langwater Rival	14194	11	5.32	36I+18J+18L+9N +9O+9P
Rutila's Gold Basis	5625	13	5.32	46I+15K+8L+31M
Imp. Silver King of the Isle	14363	7	5.31	29I+14J+14K+14N +29O
Rockingham	18120	7	5.31	29I+14J+29K+14L +14M
Increase	12450	9	5.30	22I+33J+22K+11L +11O

Progeny Guernsey sires—significantly high butter-fat percentage—Concluded.

Name	Herd book Number	No. of Daughters	Average B.F.%	Ociles
Imp. Golden Secret	12599	14	5.30	43I+14J+7K+7L+14M+7N+7O
Imp. Governor I. of the Chene	10563	21	5.29	24I+33J+10K+14L+19M
Barrington May King	19312	16	5.28	50I+6J+6K+13L+6M+19M
Frank Rose	26342	8	5.28	25I+13J+50K+13M
Vaillanteoeur	7749	13	5.26	31I+31J+8K+8L+23M
Imp. Itchen May King	25174	18	5.25	33I+17J+17K+17L+11N+5O
Beda's May King	11893	23	5.24	26I+26J+17K+17M+4N+9P
Demonstrator of Roughwood	23133	10	5.24	20I+20J+50K+10M
Langwater Demonstrator	16451	30	5.24	27I+37J+10K+7L+10M+7N+3O
Lily Ella's Squire	6597	13	5.22	31I+15J+15K+8L+15M+8N+8O
Imp. Gay Boy of the Isle	1699S	17	5.21	29I+24J+12K+12L+12M+6O+6P

Certain of the Guernsey sires are found in both groups of sires as shown in tables 6 and 7. These sires are King of Chilmark, King Bell, Lavanton, Langwater Cavalier and Imp. Governor I of the Chêne. They had their daughters significantly higher in both milk yield and butter-fat percentage than the rest of the breed.

CONFORMATION OF THE SIRE IN RELATION TO HIS DAUGHTERS' PRODUCTIVITY.

Tables 6 and 7 furnish the data for a very interesting study of conformation in the sire's offspring. They give a list of sires which are capable of transmitting high milk production and butter-fat percentage to their offspring. They furnish a criterion beside which to measure the value of present day type and the points of the score card as it relates to the sire. Were it possible to present a study of carefully taken scores and measurements of these animals it would be a contribution indeed. The American Guernsey Cattle Club has however, assisted us in this direction by the next best thing, photographs of certain of the animals. These photographs are interesting in showing a wide divergence

of type between the different sires even though these bulls all sired daughters of excellent milk production. All bulls were of at least fair type. Some were deep chested, others more barrel shaped. The back on one might be straight, another would show a curve. The tail set might be high in one but perfect in another. One bull might be deep at the hips where another showed less depth. Figures 11 and 12 show groups of three bulls taken from each table.

These figures show a fairly wide range in type for these groups of sires. This variation appears to be much the same for the sires of high milking daughters and those of high butter-fat testing daughters. Thus there appears to be no incompatibility between production and type although it appears possible to obtain a wide range of types capable of transmitting to their daughters either high milk yield or butter-fat percentage. The question cannot, however, be settled by so few data. The setting apart of a particular score card or type for the sires of a breed requires not only these researches on production but also a much more extended study of the relations of type of the sires, both those of low and high producers, to the productivity of the offspring.

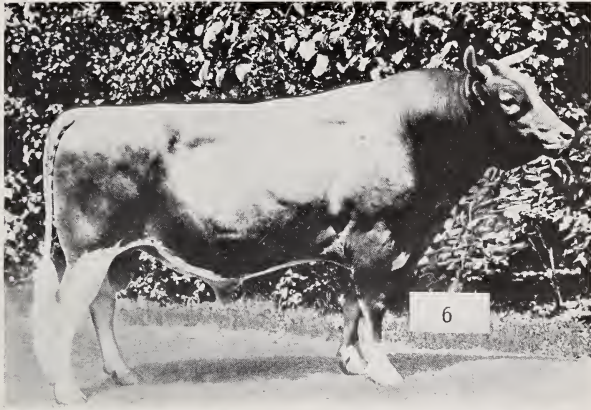
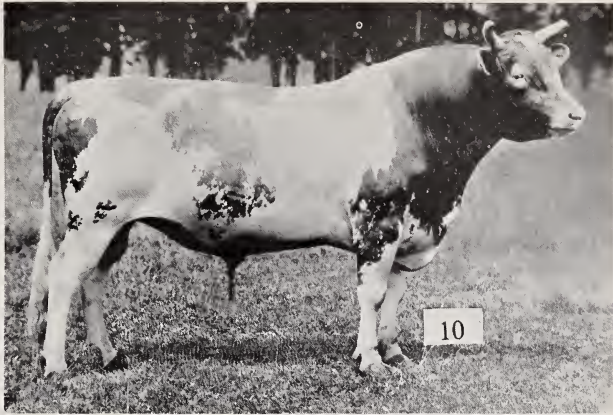


FIGURE 11. Sires whose progeny performance test showed them worthy transmitters of high milk yield. The photographs are presented to bring out the variation in conformation which may exist in such a group. Courtesy of the American Guernsey Cattle Club.





FIGURE 12. Sires whose progeny performance test showed them worthy transmitters of high butter-fat percentage. The photographs are presented to bring out the variation in conformation which may exist in such a group. Compare these types with those of the sires in the high milk producing group. Courtesy of the American Guernsey Cattle Club.

LIST OF RECENT BULLETINS

- No. 307. Sterility Relationships in Maine Apple Varieties.
No. 308. The Blueberry Maggot in Washington County.
No. 310. The Cause and Permanence of Size Differences in Apple Trees.
No. 311. The Effect of Age on the Milk Yields and Butter-Fat Percentages of Guernsey Advanced Registry Cattle.
No. 312. Potato Spindle-Tuber.
No. 313. The Summer Food Plants of the Green Apple Aphid.
No. 314. Studies on Conformation in Relation to Milk Producing Capacity in Cattle. III. Conformation and Milk Yield in the Light of the Personal Equation of the Dairy Cattle Judge.
No. 315. Abstracts of Papers not Included in Bulletins, Finances, Meteorology, Index.
No. 316. The Importance and Natural Spread of Potato Degeneration Diseases.
No. 317. The Buckthorn Aphid.
No. 318. Interpretation of Dairy Pedigrees.
No. 319. The Blueberry Leaf-beetle and Some of Its Relatives.
No. 320. Influence of Ultra-violet Light on Nutrition in Poultry.
No. 321. Abstracts of Papers not Included in Bulletins, Finances, Meteorology, Index.
No. 322. Fertilization of Apple Orchards.
No. 323. Potato Aphids.
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The following bulletins are published in limited editions and are mailed regularly to libraries and to other institutions in exchange. They represent types of publications which are not sent to general mailing lists in the State but will be forwarded to any address on request, as long as the supply lasts.

Bulletin 317.

THE BUCKTHORN APHID. This bulletin contains an account of a small greenish aphid that overwinters on the buckthorn (*Rhamnus*) in the egg stage. The first spring generation develops on the buckthorn leaves, distorting them. Later winged generations disperse to seventy or more different species of plants which the aphids infest during the summer. The bulletin gives the life history of the aphid; a list of all its known food-plants, many of which are of economic importance; a record of the habits of the species which is a pest in vegetable and flower gardens; a report of its role as a carrier of plant disease; and suggestions for control.

Bulletin 319.

THE BLUEBERRY LEAF-BEETLE AND SOME OF ITS RELATIVES. Bulletin 319 contains an account of fifteen New England leaf-beetles belonging to the genus *Galerucella*. Five of these being previously unnamed, are described as new species. Among this number is a dull yellow or reddish brown beetle which is indicated as the blueberry leaf-beetle as both the adult beetles and their larvae feed upon blueberry leaves. The females deposit eggs from late May to late July so that a succession of the larvae are present for about eight weeks. The bulletin gives a description of the egg, larva and adult insect with drawings and photographs; an account of its distribution, foodplants, hibernation and other habits, natural enemies, and suggestions as to its control. Similar though briefer descriptive accounts are given of the other species and a key makes possible an identification of the different species.